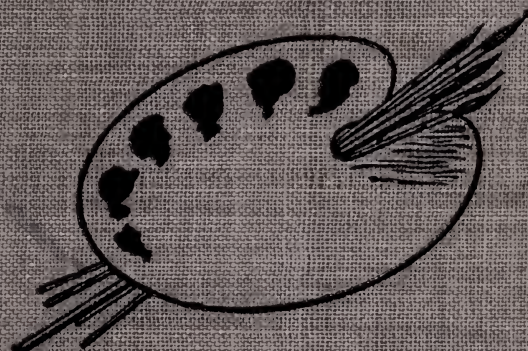


TWENTY-SECOND EDITION  
REVISED

# AMATEUR ART

BY HENRI CLARISE



LANDSCAPE, FLOWER  
AND STILL LIFE PAINTING  
IN OIL AND WATER COLORS

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PAINTING ON CHINA

---

MODELING IN CLAY AND WARE  
PAINTING

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PYROGRAPHY  
OR  
BURNT WOOD ETCHING



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BURNT WOOD ETCHING

BY HENRI CLARISE

1909

*The Lakeside Press*

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# CONTENTS

LANDSCAPE PAINTING IN OIL . . . . .	9
Palette—The Palette Knife—The Oil Cup—The Rest or Mahl-stick—Easel—Camp Stool and Umbrella—Canvas—Brushes—Cleaning and Care of Brushes—Vehicles and Varnishes—Technique—Colors—Color List—Palettes—The Permanent Colors—An All-round Palette—Palette for Landscape—A Portrait and Figure Palette—Sketching and Painting in Monochrome—Copying—Meaning of Terms Commonly Used—Values—Composition—Perspective—Foreshortening—Chiaroscuro—Successive Steps or Stages of Drawing—General Principles and Rules—Easel, Position, Light—Painting the Picture—The First Painting—The Second Painting—The Third Painting—Colors and Tints for Different Parts of a Landscape—General Hints—Methods of Eminent Painters—The Secret of the Old Masters.	
FLOWER AND STILL LIFE PAINTING IN OIL . . . . .	43
Palette for Flowers—General Principles and Rules—Practice in Foliage—Red and Pink Roses—White Roses—Orange and Brown Flowers—Blue Flowers—Red Flowers—The Scarlet Poppy—Yellow Flowers—Still Life.	
LANDSCAPE PAINTING IN WATER-COLORS . . . . .	57
Paper—Brushes—Colors—Drawing Pencils—Adaptability of Colors for Different Effects—Landscapes—Trees—General Hints.	
FLOWER AND STILL LIFE PAINTING IN WATER-COLORS . . . . .	75
Adaptability of Colors for different Flowers—Backgrounds and Foregrounds—Still Life in Flower Studies—Conclusion.	
PAINTING ON CHINA . . . . .	85
Preparation of the Design—List of Colors—On Mixing Colors—Flower Painting on China—Colors Best Adapted for Different Flowers—Figure Painting on China—Applying Gold on China—Agate Burnishers—Firing.	
MODELING IN CLAY AND WARE PAINTING . . . . .	111
Pottery Decoration—Imitation Pottery.	
PYROGRAPHY OR BURNT-WOOD ETCHING . . . . .	116
Materials—Woods—Manner of Working.	





## PREFACE

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The first edition of this book was published in 1884. It met with much popular favor and has passed to its twenty-first edition. The present and twenty-second edition is revised, entirely re-written, and modes of painting that were in vogue some years ago, but are now out of date, are eliminated. The subjects retained are treated at more length, elaborated, and improved. It is aimed to present in the most concise form all necessary information for the amateur, without the verbose details given in large treatises, which are useless until the student is somewhat advanced in practice.

There is a notable difference of opinion among artists on the question of how much actual technical instruction should be given to students. However, there are certain definite rules which are unalterable and must be observed. To be taught these in the beginning saves much time and expense that otherwise would be wasted in blundering experimentation. When a knowledge of these rules has been acquired the pupil has nearly all the instruction which is valuable to him except what may be gained from the criticism of those more experienced in the lines he is pursuing. Too much study of methods is conceded to be harmful, tending to destroy individuality, which is an essential thing in art. When talent, or even aptitude exists, the student soon becomes qualified to judge his own work, from his observations of nature or comparison with the productions of others, and will be capable of more originality by working out his conceptions in his own manner. He will profit by his mistakes because there will be a lesson in every one and when at length he is able to achieve something worth while, it will be as a creator instead of an imitator. The information herein given can be depended upon as reliable in every particular and sufficient for the beginner.

The author hopes that this little book in its new and improved form will meet with even more approval in the future than it has in the past, in the ratio that it is more practical and helpful to the intending artist.



# AMATEUR ART

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## LANDSCAPE PAINTING IN OIL

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THE materials and implements for the beginner in oil painting need not be numerous, and should be of the best quality.

Do not hamper your work by economy in this particular, but save in the number purchased. By adding to the quantity as need arises, the student is better qualified to select the essentials with discrimination and without waste.

Obtain from a dealer in art materials one of the usual tin or wood oil painting boxes and proceed to fill it with the necessary articles. It must contain colors, brushes, a palette knife, crayon, chalk, oil, and varnish. Besides these the student must furnish himself with an easel, a mahl-stick and canvas. To enable him to choose with judgment, I will describe what these articles should be.

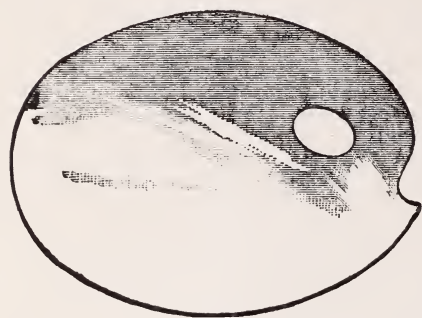
### PALETTE

The palette should be of light weight and thin, and so perforated for the thumb as to balance well on the hand; oval shapes are the most convenient, affording greater space for mixing tints and their advantageous arrangement. It should be large enough to hold a considerable number of colors, and if of wood should be light in preference to dark in choice of color.

Abendeschein recommends the use of a white palette of some material impervious to oil, as thereby tones to be mixed are more easily distinguished, and the dark transparent glazes can be more properly judged on a white surface. A final reason for the use of a white palette is that it unconsciously leads the painter to work in a higher key. Three palettes of different sizes are not too many for the outfit of a well-equipped painter.



One will do for the beginner. In addition, for use in the studio, two or three flat China tiles or a slab of ground glass about eight by ten inches square will be found very useful for keeping tints clean and apart from each other. Tints mixed and not entirely used may be preserved by immersing the tiles with colors on them in dishes of water, ready for next painting.



OVAL PALETTE

It is well to explain here that the word palette is used in another sense than the one generally understood in which it signifies the tablet on which the painter sets and mixes colors. It means also the range of colors, as when an artist is said to use a small palette, or an extensive one, it is simply a way of expressing the fact that he employs a few or a great many colors.

#### THE PALETTE KNIFE

Should be thin and flexible, with tapering blade. Occasionally you may want to mix colors, or even to paint with it. It is principally used to arrange tints on the palette and to keep the palette clean.



THE OIL CUP

The oil cup is used to contain oil, varnishes, or other vehicle used.

#### THE REST OR MAHL-STICK



Is used to rest or guide the right hand or arm when steadiness is required in painting small objects. Should be light and firm. The lower end

of stick is held in left hand, while the upper extremity, which should have a small ball on the end, rests on the canvas, or some convenient support.

### EASEL

A frame to support the painting during its progress. It should be steady and firm. The most convenient form is the rack easel, which allows the painter to raise or lower his work with speed as the occasion requires. The commoner and cheaper kinds are supplied with pegs for this purpose. Get one which is solid and practical, and that will hold perfectly well a good sized canvas. The illustration shows one of the best and firmest of the inexpensive easels.



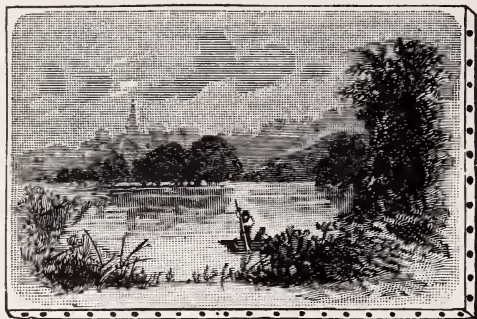
### CAMPSTOOL AND UMBRELLA

For out-door work the adjuncts shown by illustrations will be found very useful. The umbrella has a valve in the top to let the wind and hot air through and will not easily be blown over. If it is of white lined with black it will give a better shade and not reflect a discordant glow on your painting. Both campstool and umbrella fold up in small space for convenience in carrying.



## CANVAS

This is the material used to paint on. Linen canvas is the best. It should be smooth, free from blemishes, and always light in color. The usual light stone drab generally given to canvas is perhaps preferable for the beginner, affording a middle tint to start from. White is advocated by many, and should always be used when painting flowers. Of the use of a white ground in general, more will be said later. It is well to adopt one standard size of canvas, say 12 by 18 inches for the first months of practice and have on hand a frame to fit it, in which you can see your work from time to time.



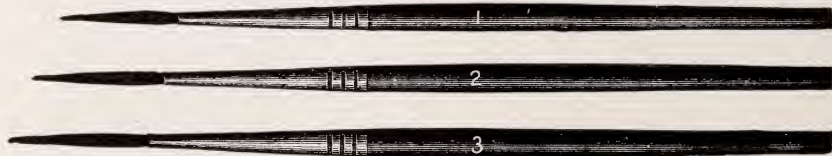
PREPARED CANVAS, MOUNTED

Canvas a year old is better than that newly prepared.

## BRUSHES

Those most suitable for oil painting are bristle and sable. The bristle brushes are made of hog hair, and with them practically all oil painting is done. Of the sables, red sable are the best, though the most expensive.

Camel's hair and the black sable brushes are too soft and flabby for oil painting. Do not buy them. You must have the thin, long red sable

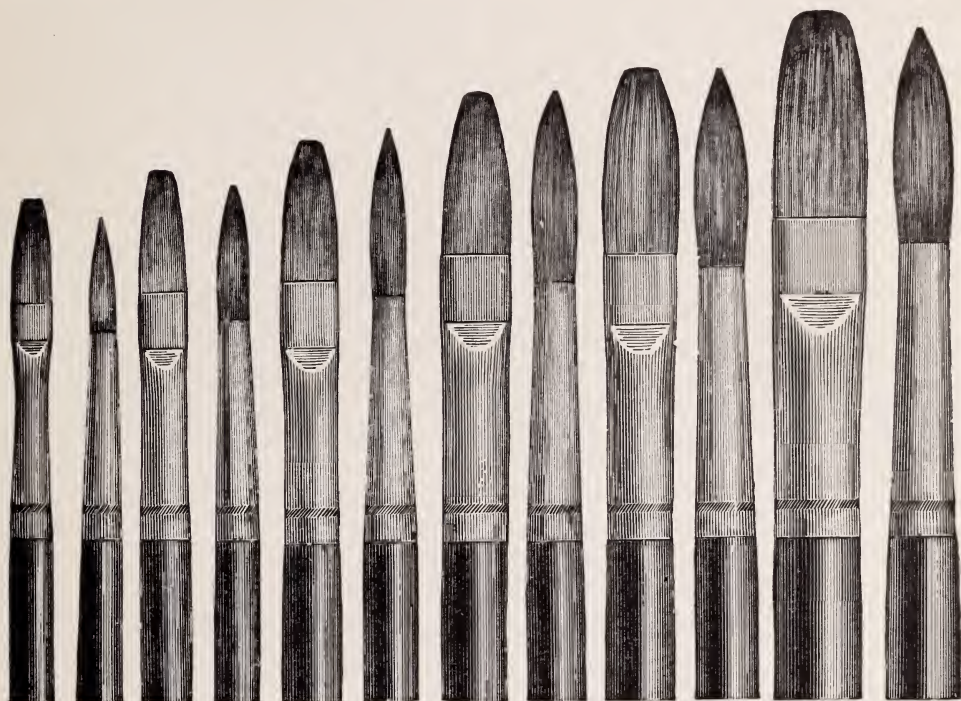


RED SABLE RIGGERS

brushes known as "*riggers*" to use in outlining, and every sort of fine, sharp touches. You will employ them in laying in a picture, for branches, twigs, etc. They are used for the rigging of vessels in marine painting, which



gives them their name. About two of each of the three graduated smaller sizes will be sufficient of this kind. Brushes should be elastic and firm and come to a good point without straggling hairs. You should have plenty of



ROUND AND FLAT BRISTLE BRUSHES

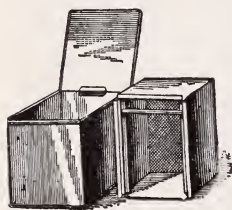
them, at least a dozen to begin with and others added as your work requires until you have a liberal number. With the first assortment have a few red sable, of medium size, besides the riggers. To these add carefully selected bristle brushes, taking care to see that they have the "flag," the natural smooth taper towards the end.

Test the evenness of all brushes before buying by moistening and pressing on the hand. If good, they will bend evenly the whole length of the hair, be springy, and at the same time firm. Vary them in size, from the thin long ones suitable for outlining and delicate touches, to the larger brushes used

for backgrounds, skies, and broad surfaces. Brushes are round and flat. Flat brushes are most commonly used. Work always with the largest brush that will do the work, as it tends to the acquirement of breadth in style. Habitual use of small brushes is apt to cause pettiness of detail and cramped methods of work. The illustrations show some of the most useful and indispensable sizes in the bristle and red sable brushes.

### CLEANING AND CARE OF BRUSHES

Immerse your brushes in kerosene oil and rinse around until all paint is rinsed from them, then pull the hairs straight and wipe on clean rag.



BRUSH CLEANER

Once a week give them a careful washing with laundry soap and tepid water. Turpentine should not be used for cleaning, as it renders the brushes harsh and brittle. Kerosene will remove all paint and will not injure the brush. Never allow paint to dry on your brushes, as it ruins them. Cleanliness is the best economy, and careful attention to keeping brushes in good condition

will conduce largely to your convenience and facility in working.

### VEHICLES AND VARNISHES

These are the mediums with which the colors are mixed to make them work fluently. Oil colors are always ground in oil as a vehicle, but it is generally necessary to add to them in working such a medium as will thin them or cause them to dry more speedily. Oils and spirits are used to thin the colors; those which make them dry more quickly are "dryers," or "siccatives." It is necessary that all these mediums should be of good quality, since they have an effect on the permanency of the colors. Good vehicles will preserve them, bad ones will deteriorate them.

**OILS.** Linseed and poppy oil are those most commonly used. It will be best not to use an excess of oil in painting, and if you need a dryer, use very little of it, and only when you actually need it in bad drying colors. Turpentine and petroleum essences can be used to thin the paint and are better than oil, as they have less tendency to darken, but they do not bind the

colors so well and the paint should not be put on too thinly with them. Moderation in the use of mediums should be practiced.

**VARNISHES.** Varnishing has the effect of bringing out the brightness and freshness of color, and preserves the painting from outside influences of all kinds. Dry your picture well before varnishing. At least four months should elapse after the painting is finished to give ample time for drying. A picture varnished too soon is liable to crack. If for any reason you wish to varnish sooner, use a temporary or re-touching varnish.

Mastic varnish is the best. Be sure that you get a good and pure quality made only by a reliable color man. It should be carefully applied without using too much. Distribute it thinly with a clean brush and protect it from dirt and dust until thoroughly dry.

Varnishes mixed with oil or turpentine are superior to those in alcohol, as the latter do not hold their freshness so well. Varnishes are sometimes used as dryers, or to mix with colors which are liable to affect other colors, or without consistency. They are, however, not often needed for these purposes.

It is a good principle to keep all vehicles and varnishes as much as possible out of your painting, except oil. The use of other mediums may come later with more extended experience. It is supposed that the old masters used as almost their only medium pure oil which had first been placed for some time in the direct rays of the sun.

This does not apply to the use of varnish on the completed and well dried picture.

## TECHNIQUE

Technique is the term used which describes the whole process of painting, its methods, and means. The acquisition of a good technique can only come with experience, knowledge, and practice. The several branches of technique have names of their own, Glazing, Impasting, Scumbling, and Handling. I will briefly describe the meaning of these terms.

**GLAZING.** Is to lay a thin transparent film of color upon another color to modify the tone or aid the effect of the latter; and is accomplished



by diluting proper transparent colors with some suitable vehicle. The student should be cautious in the use of this resource in early practice. It is, however, a most valuable process in competent hands.

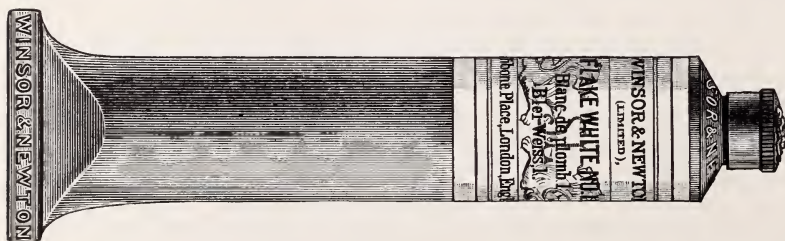
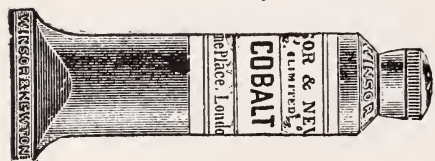
**IMPASTING.** Is a process of laying the paint thickly on the lights of the picture with full pencil and stiff color. This is often done with the palette knife with surprisingly brilliant and charming effect. The shadows and dark portions of the picture are painted thinly, and this process throws the lights into round and bold relief.

**SCUMBLING.** Is the opposite process to glazing, and is done by passing an opaque tint lightly over the work. The tint is generally mixed with white and a bristle brush is sparingly charged with it and drawn loosely and very thinly over the painting. Both in this process and in glazing, the previous work must be perfectly dry.

**HANDLING.** Is the mechanical use of the brush; in which every painter has his own distinctive style, and with practice can become as expert in his own modes of delineation of different objects, wood, water, foliage, etc., as with the pen in writing.

## COLORS

It is unnecessary to make a complete list of pigments. You will probably never need to use more than fifteen or twenty. Many artists use more, but if you become able to make the right use of that number you can wait with



patience till you "grow" to them before you add to your list; therefore, there will be

mentioned specifically only those which you will find most generally useful, and others which should be particularly avoided.

The leading manufacturers of colors subject them to rigorous tests, and those recommended for permanence can generally be depended on, if the work is well executed. The best materials will not produce good work unless they are properly used.

The mixing of too many colors should be avoided, or muddiness will result. Rarely more than three should be employed in the mixture of a tint; the fewer colors the better. Use them as nearly pure as possible. By this the likelihood of chemical changes as time elapses will be greatly lessened. It is probable that the restricted palettes used in the early history of painting in oil were of real advantage. The abundance of colors ready to hand to-day is a constant temptation to make combinations which are frequently dangerous.

A permanent color is one which under usual conditions will stand for an indefinite time.

#### COLOR LIST

**WHITES.** *Zinc white* is the only permanent white, though it lacks body and is little used. The *lead whites*, *flake*, *silver* and *cremnitz* are practically, permanent enough and are in general use.

**YELLOWS.** *Cadmium* is permanent in all three of its forms; its brilliancy is of great importance to modern painting, and if it were not permanent, would be very detrimental to quality, for which the color was used. The *chromes* of similar color quality are less permanent. *Greens* made by their use will in a few months lose their freshness. *Cadmium* is of a much finer tonality. Greens and yellows made by the admixture of chrome are apt to be crude as compared with those in which cadmium is used.

**STRONTIAN YELLOW.** A permanent and useful light yellow; is to be preferred to all other citron yellows, except pale cadmium.

**NAPLES YELLOW.** A durable and safe color. In the simplification of your palette, you will not especially need this color, as you can get the same quality with cadmium and white.

**THE OCHRES.** Are safe pigments; use them with any colors which are themselves permanent.

• THE SIENNAS. *Burnt* and *raw* are native earths, and, like the ochres, very old and permanent colors and may be used anywhere.

THE UMBERS. Rank among the yellows in the same class with siennas and ochres. The browns of umber and siennas will make greens with blues.

YELLOW LAKE AND INDIAN YELLOW. Are both fugitive colors and should be avoided.

AUREOLIN. Is of the greatest permanence, a rich, warm golden yellow, can be used in place of Indian yellow and yellow lake.

REDS. The vermilions are permanent colors; of great body and power. There are two varieties — *Chinese*, which is bluish in tone and *scarlet* and *orange vermillion*, which have the yellow quality; both kinds are extremely useful to the palette and are much used.

LIGHT RED. Is a fine color and has the same permanence as the other ochres. It is of especial value in painting flesh and mixes safely with everything.

THE MADDERS. *Rose*, *pink*, *purple*, and *madder carmine* are the only transparent reds which are permanent. Do not confound the *madders* with the *lakes*, which are absolutely not to be trusted. The madders and lakes are practically the same in color when first used. The lakes will fade, and the madders will not. The madders cost twice as much as the lakes but you must have them, for the lakes cannot be made to stand and you must have the color. Pay the price and buy the madders.

THE LAKES. *Scarlet*, *geranium*, *crimson*, and *purple* are all bad. Both the madders and lakes are slow dryers.

Distinguish the so-called *madder lakes* and the *lakes*, and between *carmine*, which is a lake, and *madder carmine*, which is a madder.

BLUES. The *ultramarine* is so costly as to be practically unused to-day. The artificial ultramarines, though not having quite the same purity of color, are equally permanent. Of these the *brilliant ultramarine* approaches nearest in hue to the real lapis lazuli. The *French ultramarine* is a splendid deep blue, though less clear and vivid, and most useful. *Permanent blue* is not quite so permanent as its name implies, but enough so for all practical purposes.



*Cobalt blue* and *cerulean blue* are two pigments, one very light and pure, the other darker. In oil, they are permanent and will not change when mixed with other colors. The cobalts are indispensable for delicate tints and when the tones are to be subtly gray, yet full of the primary colors. These colors should generally be on the palette. Cobalt blue is of more importance than cerulean blue, but in clear, delicate blue skies, the latter is often the only color which will produce the effect.

*Prussian blue* possesses a depth and power and quality which makes it unique among colors. Its greenish tone makes it of great value in certain combinations as far as its tinting effect is concerned. But it changes under various conditions, fades with the light, and is not reliable as a pigment. *Antwerp blue*, which is only a weaker kind of Prussian blue, is still more fugitive; these colors cannot be depended upon. Therefore they should be excluded from the palette.

*Indigo* cannot be classed among the even moderately permanent colors.

*The blacks* will make green if mixed with yellow, therefore they may be classed as blues. They are all permanent. The two blacks most in use are *ivory black* which has a reddish cast, and *blue black* which is weaker, and without the purplish tinge, often an advantage.

GREENS. There are numerous greens on the market, of varying degrees of permanence. It is not necessary to refer to all of them; therefore, we will confine ourselves to those really necessary.

*Veridian* or *emeraude* is the deepest and coldest of our greens, and is permanent. It needs the addition of some yellow which holds its own at night, such as yellow ochre, or the painting will not look well under gas or electric light.

*Emerald green* is a generally permanent color, though it sometimes turns dark and loses some of its brilliancy. Should be used in small quantities. It is a brilliant light green, very effective, but should be carefully used.

*Terre verte* is a weak color, but tender in its quality and permanent to all intents and purposes, very useful to use in mixtures with ivory black to slightly modify a reddish tendency, and is a fine glazing color.

The *chrome greens* known as *cinnabar*, *zinnober*, or *Brunswick greens* are all unreliable. The colors are good, but will not last. Even better colors can be obtained by mixing certain yellows and blues; therefore, it is best to lay these aside.

OTHER COLORS. I have said nothing about the various browns, olives, and purples. It is better to make all these colors than to get them in the tubes. Madders and good blues will make all the shades of violet and purple in their purity. The earths and browns of madder are all good. It may here be remarked that *Vandyke brown* must never be used with opaque color or in combination with white. Either alone in full body, or mixed with other transparent colors for glazing, it is valuable.

### PALETTES

It will be seen that we have quite a number of pigments which are solid, safe, and permanent, of each of the primary colors, and of such a variety of qualities that the whole range of possible color is practicable by a combination of them. Let us make a list of them.

### THE PERMANENT COLORS

Zinc White	Flake or Silver White	Cadmium Yellow
Cadmium Orange	Cadmium Yellow, Pale	Strontian Yellow
Yellow Ochre	Roman Ochre	Transparent Gold Ochre
Raw Sienna	Burnt Sienna	Raw Umber
Aureolin	Chinese Vermilion	Scarlet Vermilion
Orange Vermilion	Light Red	Rose Madder
Pink Madder	Purple Madder	Madder Carmine
Rubens Madder	Ultramarine Blue, Brilliant	Ultramarine Blue, French
Permanent Blue	Cobalt	Cerulean Blue
Ivory Black	Blue Black	Veridian
Emerald Green	Terre Verte	

To these might be added *Permanent Crimson*, which is a color of comparatively recent introduction; it partakes of the nature of the cochineal lakes in point of hue, but differs from them in its character of permanence.

It is impervious to the action of light or other agencies, and is of use in mixtures. This color is considered by many painters to be one of the greatest acquisitions to the modern palette.

**MAKING UP THE PALETTE.** In setting the palette, you should have at least two of each of the three primary colors — red, yellow, and blue — and white. In each of the primary colors there are paints which lean towards one or the other of the other two. The scarlet red is a yellowish red. Chinese vermilion and rose madder are blue reds. Yellows and blues are the same, as orange cadmium is a red yellow, and strontian yellow is a greenish yellow. To obtain the purest and richest secondary color, we must take two primary colors, each of which partakes of the quality of the other. To make a pure orange, use a yellow red and a red yellow. Should we commit the mistake of combining a bluish red and a bluish (greenish) yellow, the blue in both would result in a negative secondary instead of the pure color of orange we wish to obtain. The latter principle is quite as useful in keeping colors gray without too much mixing when we want them so, but it is necessary to know how to get a pure color also. The character of the work you are doing will have an influence on the colors you use. Different subjects of work require different palettes. You can have one large enough and containing colors sufficient to do all sorts of work, by a change in the combinations; but it is well to have a knowledge of how to compose a palette to suit the work you are intending to do. To that end I will suggest three palettes of different combinations, made up from the colors numbered in our list. The first may be styled an all-round palette, suitable for painting almost anything, especially still life, and is adapted for use indoors. The student will find it entirely adequate for any work he may be capable of during the first months of practice.

#### AN ALL-ROUND PALETTE

White	Burnt Sienna	Strontian Yellow
Orange Vermilion	Raw Umber	Cadmium Yellow
Rose Madder	Ultramarine	Orange Cadmium
Yellow Ochre	Cobalt Blue	Ivory Black
	Terre Verte	

## PALETTE FOR LANDSCAPE

The following palette is recommended as a good general one for landscape. It contains no browns or blacks, which should be made by combinations of the purer pigments, which give life, vibration, and daylight to the colors. The siennas and umbers rank among the yellows. Use ochre to warm the veridian, and ultramarine and rose madder for the blacks, with veridian, if the color should be too purple.

This palette is also suitable for the painting of figures out of doors.

White	Veridian or Emeraude Gre	Strontian Yellow
Orange Vermilion	Madder Carmine	Cadmium Yellow
Pink Madder	Raw Sienna	Orange Cadmium
Rose Madder	Burnt Sienna	Yellow Ochre
Cobalt Blue	Raw Umber	Ultramarine Blue
Emerald Green	Cerulean Blue	Aureolin
Light Red	Terre Verte	

## A PORTRAIT AND FIGURE PALETTE

White	Rose Madder	Cadmium Yellow
Chinese Vermilion	Raw Umber	Orange Cadmium
Light Red	Blue Black	Yellow Ochre
Transparent Gold Ochre	Cobalt Blue	Terre Verte

While this palette may not be strictly in place in directions for landscape painting, I think it is well to give it, as the student may wish to vary the objects of study by an essay in this line.

These three palettes are all safe and practicable and will give an idea of how a palette can be composed to suit your subject. I do not claim that you should confine yourself entirely to them, or to the list of colors given. The palettes given have the arrangement of two of each of the primary colors. It may here be explained what is meant by the terms *primary*, *secondary*, *tertiary*, and *complementary* colors. Primary colors are those which cannot be produced by the mixture of other colors. Red, yellow, and blue are the primary colors. Secondary colors are those produced by a mixture of two primaries, as red and yellow produce orange, yellow and blue produce green,

red and blue produce purple, etc. Tertiary colors are mixtures of any two secondary colors, and complementary colors are any two which between them contain a proper proportion of each of the three primaries to form a harmony.

### SKETCHING AND PAINTING IN MONOCHROME

Studies either from nature, from casts, or from still life may be made in oil color on a prepared oil paper to be obtained from dealers, or regular canvas. The colors best suited for these are:

Blue Black	Yellow Ochre
Ivory Black	Light Red
Raw Umber	

These five colors broken into tints with white will produce every gradation suitable for imitation of casts or studies from nature and still life.

### COPYING

Copying is a valuable means of study for the beginner, if not practiced to such an extent as to make the student clever as a producer of pictures before he has educated his ability to see and render them from nature. It is chiefly useful for the acquirement of technique; the general management of color and composition.

The copy should be, as nearly as possible, a faithful reproduction of the original. Imitate the exact processes, study and use the same methods, as accurately as you can.

In doing this, remember that you are acquiring only the surface work of painting, seeing with the eyes of another what you must learn to see with your own, and become able to construct from nature. Therefore, copy with moderation; as a general rule, study from nature in much greater measure.

In copying a painting, the work may be hastened by what is called "squaring up" the study. Make a network of squares, which maps out its proportions. To do this, first mark off a number of points horizontally



and vertically on the study. Do not have too many, as it makes you more trouble; have the number to suit the lines of the subject. Then draw straight lines across the study from each of the points, seeing that the lines cross exactly at right angles. Number the spaces at the top and at one side. Square off your canvas with the same number of spaces at top and sides as you have done with the study and you can then draw the outlines as they fall in the study and have them the same in proportion. In this manner any study may be accurately transferred to any surface desired, enlarged or reduced in size.

### MEANING OF TERMS COMMONLY USED VALUES

This term means simply the relations between the degrees of strength of light and dark. The relative importance, strength, force, power, and value of a touch of color to make itself felt in the whole — that is its value. A false value is a touch of color which has not its proper relation to other spots, or masses of color in the picture considered as light and dark — not as color *per se*. Values constitute what might be termed a “fourth dimension,” to be measured by your eye and without mechanical aid.

### COMPOSITION

Composition is the general planning of the picture, and should be carefully studied before beginning work, in accordance with the scheme of what the picture is to be. You may do this very quickly, but it is of the utmost importance. You cannot have a good picture without good composition. You may call it the study of means by which the balance of the picture comes about, but you must understand the word balance in its broad sense. Everything which is to be in the picture must be considered in making the picture balance. Arrangement of lines, forms, masses, and colors must all be right if the composition be right. Rules are of very little use, as it is a thing which is the very essence of art. Ability in composition can be acquired when it is not natural. It is evolved from a continuous training of the sense of proportion and arrangement.



## PERSPECTIVE

There are two kinds of perspective, linear and aërial. The former relates to the manner in which horizontal lines appear to converge as they recede from the foreground, and thus produce the effect of distance. The latter has to do with the effect of distance, which is due to the successive gradations of gray in color noticeable in objects farther and farther away from the observer. What you have to do to express aërial perspective is to learn to recognize the relative tones of color. Atmospheric perspective is simply another name for close values, which are the subtle relations of light, shade, and color.

## FORESHORTENING

Is akin to perspective, and the reverse of it. Foreshortening means the way in which anything seems shortened, or in modified drawing as it projects towards you; while perspective is the manner in which lines appear as they recede from you.

You can work out perspective by rule, not so foreshortening. Copy your object as it appears; make your measurements and place your lines as if there were no problem of foreshortening at all. If you get your relations of lines, size, and values correctly, the foreshortening will take care of itself.

Foreshortening is simply good drawing. Therefore, learn to draw and you will produce the effect you wish without trouble.

## CHIAROSCURO

This is a term that was in more frequent use thirty or forty years ago than it is now. It is, however, a very expressive word, and the student should know what it means.

Chiaroscuro is an Italian compound word, with two parts, *chiar*, and *oscuro*, which simply mean bright and obscure, or light and dark. It signifies the disposition and arrangement in general of lights and darks with all their degrees of tint and shade, as the parts of a picture, and in combination as one whole so as to produce the most desirable effect upon

the senses and spirit of the observers. Its aim and end are fidelity and beauty of imitation. It means every effect of light, chromatic values, chromatic harmonies, and contrasts.

### SUCCESSIVE STEPS OR STAGES OF DRAWING

Good drawing is the basis of good painting. Some great artists, as Turner, for instance, have been notably deficient as draughtsmen, but in every case such deficiency has been made up by excellence in other directions, as richness of color, atmospheric effects, etc. To be both a poor draughtsman and inferior painter is unforgivable. It will be understood that the student has acquired some knowledge of drawing and is able to render accurately the objects he wishes to paint. The following general directions, if carefully followed, will be found of great service in making preliminary sketches.

First, contemplate your picture as a whole and estimate the relative importance of the masses in it, placing the larger masses before you begin on detail. Consider the largest proportions, next the relative proportions. Have this as your first rule in drawing. Give ample time to the work of laying in the larger proportions, because when these are correct, a slight accent tells for twice the value it would otherwise.

Next lay out your proportions of light and shade in the same way that you have laid out the proportions in mass, avoiding the small until the large variations of shade are rightly placed. Do not be afraid of sharp edges, which will be broken up later.

Use measurements freely, as they are indispensable to accuracy. They save much time and trouble and the student will soon learn to make them mechanically without reflecting about it. The successive steps of drawing may be outlined as follows:

First. Measure the height and breadth of the whole group of objects, with accuracy, marking each extreme.

Second. Outline the whole mass of it in simple lines, giving only the general shape of the objects; this may be called the blocking in.

Third. Outline and block out the most important of the lesser

proportions in each object, which will map out your drawing with some completeness.

Fourth. Lay in simple flat tones to fill the outlines, being careful not to obliterate the relations of light and shade as you proceed.

Fifth. These successive steps will leave your paper with large masses of dark and light which can be broken again with the next smaller masses and such accents added as will give clearness, character, and force to the work. There must be equal freedom and exactness in good drawing. A careful study of these methods will ensure excellent results in which structure will be shown without unnecessary detail.

Materials. For all the uses which are within the range of the painter there is nothing equal to charcoal. It is equally adaptable for studies and sketches on paper, or drawing on canvas.

In drawing on the canvas it is generally only necessary to draw the outlines with care and accuracy. When shaded drawing is required in pictures which include important figures, it should be done with charcoal and a fixative applied afterwards.

### GENERAL PRINCIPLES AND RULES

No exact and inflexible mode can be laid down for guidance, for the reason that painting is the art of expression in color, and there are just as many ways of painting as there are painters. In whatever methods the painter has been trained, he will inevitably change them to accord with his own ideas and purposes in ways which will, in his opinion, most surely bring about the representation of what he wishes to express. It is well that this is so, since only thereby is originality and individualism in art attained. There are, nevertheless, certain facts he must know as to the mechanical means of good work; how to put on the right color, in the right place, in the most simple and direct manner. The better the way of handling, the better the finished work will be.

If you essay a landscape, choose a canvas not to exceed 12 by 18 inches in size. Those larger or smaller are difficult to manage in early practice. The tint of the canvas should be very light gray or white. Light back-

grounds tend to enhance the brilliancy and transparency of the colors, and to prevent the liability of darkening with the lapse of time.

### EASEL, POSITION, LIGHT

A northern light is generally considered best. Adjust the easel in such position that the light falls upon the painting from the left of the artist. Darken the lower half of the window by a green baize curtain, or other suitable fabric. Cross lights should be avoided. Too harsh and strong light is apt to lead to coarse coloring, and dull light to the contrary effect. A medium must be observed. The larger the room the better, and it should be kept free from dust.

### PAINTING THE PICTURE

Having in accordance with the foregoing directions drawn your design with firm hand and well defined outlines, you can "rub in" the light and shade, or the first coloring of the picture, by a thin mixture of one color, as umber or sienna, sometimes called a *frotté*, or you can use all the colors in their proper places, only using very little oil, making them thin in tint, something between a glaze and scumble. You can choose between a complete drawing in monochrome with thin washes of a single color, or by thinly laying in all the ground colors, you can obtain very much the effect of the complete painting. Either method will produce a sympathetic ground to paint over, and every color you put on will be surrounded by approximately the true relations, obviating the annoyance of a glaring white canvas.

The sketch or preliminary coloring being laid in, the systematic painting of the picture may now be commenced.

The different portions of the work, in its progress, we will designate, as a *first*, a *second*, and a *third* painting; the *first* painting consisting of the early or dead coloring; the *second* being that in which the subject is brought forward to receive the finishing work, which work constitutes the *third* painting.

It may be observed, that the landscape painter cannot *rigidly* adhere to this division, which may be followed out by the portrait painter. These are intended only as general directions to be varied at convenience.



## THE FIRST PAINTING

Have near your easel a slab of ground glass, or a china tile, on which prepare your tints to a proper hue and consistency before they are transferred to the palette; and bear in mind that a large number of tints cannot be managed with the same ease as a smaller one.

A set of tints for the sky and for the distances is now mixed; and you commence with the blue of the sky, working downwards, and securing a proper gradation of color; then follow the distances, mountains, etc. The same tints are employed throughout this part of the work, only somewhat strengthened by deeper gray tones, which, in the after-paintings, are gradually abandoned for the local colors of the foreground. The sky and the distance being thus laid in, the work is left to dry.

Apply the color chiefly by touches or strokes of the brush, in succession, from left to right, beginning at the left upper angle of the picture, and laying the color in nearly of the same thickness throughout.

The color should be tempered with a proper quantity of vehicle, that it may work crisply and pleasantly, and, laid sparingly upon the canvas. Short-haired brushes are best adapted for painting with little color.

In laying on, or "impasting" the lights, the brushes should be rather longer than those used for the general painting; because such a brush will be found to yield the color more readily.

In the first painting, the lights are laid on with a moderate quantity of color, the shadows being put in more thinly. Let all the tints be introduced in a firm and clear manner; for, by laying them on in this firm way, you prevent a turbid or muddy appearance. Having mixed a well-ordered set of tints, place every color at once, as nearly as possible, where it is to remain.

## THE SECOND PAINTING

When the first painting is dry, the picture should have a damp cloth passed over its surface. Being then wiped dry, let it be rubbed over with small portion of poppy oil, for this makes the after-painting unite with the first. It is a mere moistening of the surface that is required. All surplus

must be removed by the moderate application of a piece of silk or soft linen.

In a second painting, we give more attention to the characteristic details of the various objects. Their drawing, light and shade, reflected hues, and varieties of tints in coloring, are more elaborately made out; the relative distances of objects from the eye are most carefully preserved, and the shadows, being still painted thinly and transparently, are carefully united (where it is necessary to unite them) with half tints, so as to produce roundness or solidity. A great body of color is laid on the lights, which are also now penciled with great attention to character and sharpness; and the touches on the high lights are put in with firmness and precision.

The badger-hair softener is now to be used, but cautiously and sparingly, to unite and soften the tints into each other, and to reduce the surface to a level, by removing the marks of the brush.

Let the early paintings be of a light and rather brilliant style of color; for, in finishing, it is scarcely possible to prevent the brighter colors from being cooled down and subdued. Avoid the early introduction of much cool color, which can be conveniently and effectually added as the picture advances toward completion. Strong tones and shadows should not be laid in with too much power and depth, but something should rather be left to the deepening effect of time.

Thus it will be understood how the second painting should give us a tolerably finished effect ere we proceed to the final or *third* painting.

### THE THIRD PAINTING

The third or finishing painting is commenced by wiping and oiling the picture in the same manner as for the second painting. We then proceed to complete those details of form and color which were brought forward in the former paintings — employing, for this purpose, delicate touches of glazing and scumbling alternately; not to conceal, but to improve, and to render as perfect as possible, what has been already done. Sharp vigorous touches are now to be given, where the markings of the details require them, and where there may be either too great a softness or an obvious want of charac-



ter and transparency. These isolated touches must be made with freedom and decision. Smaller brushes may be used for this part of the painting.

In this stage of the work, do not attempt too much at one sitting, as, by proceeding too far, the tints laid by scumbling and glazing interfere with each other; and the eye, by coming more frequently to this important duty of judging the work, is better capable of seeing where the necessary touches are most required. It is best to allow the colors to dry gently, and to repeat the operation when necessary.

At each separate stage of painting, the whole canvas should be carried forward equally, not entirely finishing any one part in advance of others. The picture should progress as a whole, in the same degree, until finished. There may be any number of paintings after the first two, but they will all be modifications and divisions of the third painting, which represents all processes necessary to complete the work. Do not cease from your efforts until the picture entirely expresses the conception you have in mind. In the final painting there remains to be done the strengthening, enriching, and harmonizing of colors, values, and accents, which sometimes necessitates a general overworking of the whole composition.

## COLORS AND TINTS FOR DIFFERENT PARTS OF A LANDSCAPE

### THE SKY

In the preparation of sky tints, it is to be observed that they are graduated in intensity by a greater or less quantity of white; and in laying them on, we place the strongest of them at the highest part of the sky, making them paler and less intense as we descend towards the horizon, where the use of blue in the tint is discontinued, and other tints are used suitable to the character of the picture and to the time of day under which it is seen.

In the painting of skies it must be kept in mind that even on the stillest day they are full of movement, and the cloud masses are continually changing. Where no clouds are visible there will be vibration in the blue, which is not to be expressed by dull, dead, and flat tints. Therefore paint

skies loosely, with a broad flat brush and half mixed colors. You can work these in so the whole tone will be even, but neither dense, nor dead. Free, loose, and vibrating color is the essential element for skies. Study also the massing of cloud forms in the composition of your landscape.

In order to preserve the aërial aspect of the sky, it should not be painted with too many colors. The sky palette should be simple — the colors few; but let there be as many *gradations* of those colors in loose mixture as possible.

The most useful colors for painting skies are:

French Ultramarine	Aureolin
Vermilion	Yellow Ochre
Light Red	Cadmium Yellow
Madder Carmine	Raw Umber

the necessary gradation of them being produced by an admixture of white.

They may be combined as follows:

Aureolin and White  
 Cadmium Yellow and White  
 Yellow Ochre and White  
 Vermilion, Cadmium Yellow, and White  
 Rose Madder, Aureolin, and White  
 Madder Carmine, Cadmium Yellow, and White  
 Vermilion, Yellow Ochre, and White  
 Light Red, Yellow Ochre, and White  
 Madder Carminé, Yellow Ochre, and White

the proper gradation in each being produced by a greater or less admixture of white as before.

#### CLOUDS

For the painting of clouds the following colors are used:

Cobalt, Aureolin, and White  
 Ultramarine Blue, Vermilion, and White  
 Ultramarine Blue, Light Red, and White  
 Ultramarine Blue, Raw Umber, and White  
 Ultramarine Blue, Raw Umber, Cadmium Yellow, and White

In clear evening skies the following tints are found to be of great service:

Madder Carmine, Aureolin, and White

Madder Carmine, Light Red, and White

Madder Carmine, Light Red, Yellow Ochre, and White

*Light clouds* are painted over the azure ground with little color only. Violet grays, which are chiefly required for this purpose, are composed, in varying proportions, of:

Ultramarine Blue, Light Red, and White

Ultramarine Blue, Light Red, Madder Lake and White

Ultramarine Blue, Light Red, Yellow Ochre, and White

Ultramarine Blue, Light Red, Aureolin, and White

If the tone is required to be very bright and pure, use vermilion in place of light red.

In order to give solidity and brightness to the high lights of the clouds, these lights must be laid on with stiff color, having but little vehicle in it.

Generally speaking the clouds may be painted on the sky, while it is yet wet; and they may thus be united with it, by having their edges a little softened. But where the *lights* of the clouds are to be made with sharp, well-defined edges, these lights may be best produced by being placed in when the first flat painting is quite dry. When painting into wet color is necessary it must be carefully done to avoid muddiness.

As clouds constantly change in form, no shape they assume can be called characteristic. The type forms, as *cumulus*, *cirrus*, *stratus*, or otherwise, ideas of motion and lightness, with a suggestion of the direction of the wind in the way they mass, sway, and flow are the effects you must get. Do not outline them too rigidly. A cloud mass is never hard. Pitch, luminosity, and subtlety unite to attain the right effect, and these qualities in your painting must be subjects of careful study.

#### DISTANCES

The *sky line* is the boundary between the horizon and the sky. In order to procure the truth of nature, it is of consequence that this boundary be marked in a manner so far free from indistinctness and from

confusion with the sky as to preserve a good general shape. In fact, it is often the strongest line in the picture.

Distances are painted with the same tints as those used in the sky, somewhat strengthened, however, by deeper gray tones.

Distant mountains or high lands will often have their summits well defined, by colors as well as by lights and shadows, when their bases are not visible. This is occasioned by the mists and vapors which are constantly exhaled from the lower portions of the ground; for which reason the distant summits must obviously be more clearly marked out than the bases, even though the latter be considerably nearer to the eye.

All distant objects, lying immediately under the effect of a clear sky, will have in their hues a portion of the azure or other tints of the sky; and hence, distances are generally laid in with the sky tints modified, as we remarked before, to the occasion in hand.

They should be treated broadly, *i. e.*, without much detail, and with masses of light and shadow, each, of course, being modified by the degree of remoteness in the objects, as well as by the supposed state of the atmosphere, and the time of day.

#### MIDDLE DISTANCES

As the objects advance towards the foreground, a little more distinctness of color may be given; but it must rarely be stronger than that which black, white, and Yellow Ochre will produce; or a delicate gray and Naples or Cadmium Yellow; and a little warm color may be interspersed, either in the buildings or in the objects which may require such a variety.

It is of the first importance to make the middle distance, in color and in the nature of its objects, of such a character as will lead the eye agreeably and imperceptibly from the third distance to the foreground.

The colors used for middle distances, are:

Terre Verte	Cadmium Yellow
Vermilion	Yellow Ochre
Burnt Sienna	Light Red
Madder Carmine	Madder Brown
French Ultramarine	Raw Sienna

The tints for middle distances are made by a graduated admixture of:

White with French Ultramarine and Vermilion  
White with French Ultramarine and Light Red  
White with Terre Verte and Light Red  
White with Terre Verte and Vermilion  
White with Terre Verte and Madder Carmine

All these tints are for the production of warmth, and are to be enriched by yellows, or to be glazed. When you mix a tint in which red, white and yellow occur, mix red and white only, and add the yellow afterwards; which less disturbs the transparency of the tint.

#### TREES

It is of the first importance in painting to represent and distinguish the different varieties of trees; and this is done rather by the nature of their branching,—their general appearance,—than by their color and leafing.

When near the eye, the masses of the foliage, as well as the general hue and tone of the verdure, should be carefully studied and observed; and these are to be truthfully depicted, not by marking out the shape of each leaf, but by a peculiar touch and handling, which at once informs the eye to what family the trees belong, willows, or oak, or sycamore, for instance.

In the middle distance, the greens of the land and trees must gradually partake of the aërial tone of the third distance, in proportion as the objects recede toward the horizon. Yet it is well not to neglect those accidental touches of the sun's rays, which give such important aid to the painter, by separating the various divisions and breaking the monotony of the landscape. These bright spots of light should be slightly golden, yet of a very subdued character compared with similar effects in the foreground.

Having thus observed the proper color, lay the foliage in irregular blots, with a brush filled with plenty of color. Then take a small sable pencil, and mark out and form these irregular blots into a more defined shape and variety of touch.

Painting into the depths of the shadows, with decided dark touches, prevents the whole from being flat and heavy. It is necessary also to paint



into the retiring, *i. e.*, the more distant portions, while yet wet, with more delicate opaque tints; for this not only takes off the effect of too much sameness, but gives greater relief to the advancing branches.

If you wish to give the appearance of light shining either through any particular branch of foliage or upon it, paint such parts in the first instance in high relief; and when dry glaze over them with a brighter color, but do not, in the first painting, make your trees of a fine green; depend rather, for the proper effect, upon repeated glazings and touchings afterwards into the masses, with delicate gray and green tones.

For greens in shadow there is no need of blue; they may be formed of a mixture of black and different yellows; the olive-toned greens thus produced are soft and very harmonious for shadows.

Should you wish the tint to partake of a light grayish cast (as in the case of willows in shadow), use black, cadmium yellow, and white. If a yellow reddish tint be needed for these dull greens, let the yellow predominate; but if the verdant part you are painting be now so far back in the perspective that the violet gray-blue tint, peculiar to the distances, begins to take an aërial tone, then use cerulean blue.

In painting trees, it will be necessary to make the extremities of the branches more tender in color than the middle parts; and by letting the light be seen through various portions, great thinness and beauty may be attained, and thus that solidity and heaviness avoided, which are so unpleasant to the eye.

STEMS AND TRUNKS OF TREES. Having painted the stems in with a gray color as near to nature in tint as may be practicable, take your pencil, and, with its upper end cut to a fine point, draw the details in through the color while yet wet. When the whole is dry, glaze over those details nearest to you with an admixture of a little black and burnt sienna, and wipe it partially off, so that a portion may remain in the crevices. On the other hand, scumble over the distant stems, as well as the retiring parts of the nearer ones, with a little pearly gray, causing them to melt in with the surrounding background. For their foliage, when they have any, touch it in with blue and ochre for the dark leaves, and with terre verte and cadmium yellow

for the lights, using a finely pointed sable to give the character of the leaves, and gradually throwing them into a mass as they retire.

The following mechanical processes are frequently resorted to, to produce a representation of foliage.

An old, worn hog-hair tool, having scanty hairs, and those of irregular length, is employed. Such a brush leaves a jagged, varying touch.

Sometimes the brush is crushed perpendicularly and flat upon the color of the palette. This causes the hair to diverge irregularly from the tie or ferrule; and, the points of the hair being thus charged with color, the brush is held loosely between the thumb and finger, and the points of the hair touched upon, or rather jerked against the work. The irregular scratchy-looking foliage, thus produced, is touched and worked, while it remains wet, with small hog-tools or sables.

Color is laid in for grass by lightly touching the canvas, and jerking or flicking the brush upwards so as to produce a free and natural representation of irregular blades of herbage. For long straggling stalks of grass, or for weeds, a finely-pointed sable is used in a similar manner.

#### FOREGROUNDS

In commencing with the foreground, use the end of a hog-hair tool, well filled with color (either burnt sienna and cobalt blue, or ochre and blue), and lay in the several masses in strength as they may respectively require; and, having thus got their general form and breadth, proceed to make out the details with a finely-pointed sable, using raw sienna and blue in the tints, and cadmium, yellow and blue for the lights.

Now proceed with the finish and detail, by marking out weeds, grass, stones, and creepers, which give such charming richness and variety to the picture; with here and there a branch jutting out — in high relief. Flatten the ground behind them in order that they may be painted with sharpness and finish.

In working up the foreground avoid elaborating so minutely as to make the objects appear studied and too obtrusive as compared to other parts of the picture.

A common mistake of amateurs is to paint vegetation and foliage too green. Nothing is more offensive than too coarse and raw a green made of blue and yellow. By combining a red or orange, as burnt sienna, with the greens, there is imparted to them a more subdued and natural hue.

In painting water, whether in motion or stillness, do not make it too light for its surroundings, which throws the whole out of harmony. Nothing is more conducive to beauty in a picture than well-painted water, either as a winding or falling stream, or still or rippling lake. Water in shadow is sometimes of a brown color, when the current flows through moss, as do the rivers in Devonshire, England.

In studying a body of water you will never find in its motion a recurrence of the same thing in exact form and color, but by focusing the eyes on one place you will see a succession of waves of nearly similar kind. Follow them as they flow on and it will be perceived that changes come and go, but the general wave form is preserved for some time. After a while you will come to know, and can represent, the wave forms in broad outline but definite direction and movement. The study of coast scenery is full of changing beauty, with the surf and breakers and contrast of colors of land, rocks, and sea; an enchanting and ever varying subject for the painter. No one should attempt to paint the sea except he has a love and feeling for it which would make him half a sailor, for true art is, after all, only a translation of what is within the artist to the form and color on the canvas. He must perceive "the light that never was on land or sea," and while the ideal can never be quite attained, there always being something just beyond which continues to elude him, he cannot abandon the effort and the pursuit nor be content with mediocre performance.

#### GENERAL HINTS

A mode of painting much practiced in France, under the name of *premier-coup*, which translated literally means "first stroke," teaches that the painter should use no after or overworkings at all; that he should very carefully select the color for his brush stroke and lay it on the canvas by a single first stroke, every succeeding stroke being laid beside some

previous one, until the canvas is covered by a mosaic of color with no color laid over to modify the effect. The practice of this method is excellent training for the eye and hand, but it would be difficult for the beginner to adhere rigidly to it without seeking to blend the different tints into each other. This manner of painting is useful in the making of sketches and studies, leading to a good control of the brush and palette. The paints should have body and transparent colors used only where they are required to modify the tint of the pigments. In most cases it is best for the beginner in the making of pictures to adhere to solid painting, leaving experiments to the future.

In mixing of colors, do not stir them too much, as it takes the life out of them. Particles of pure color, not too much broken up by mixing, give vibration and brilliancy and are the reverse of muddiness. Avoid fussiness. Be tolerably certain what you wish to do, and do it with positiveness and not too much working over. Use not more than three colors in a mixture, if you can help it, and combine them loosely together with the brush, then lay on the tint boldly. Do not apply one color over another while wet if it can be avoided, as the result probably will be deadness and destruction of brilliancy.

Keep your colors fresh and clean and make your brush strokes fearlessly. Do not make ineffectual little taps with your brush, but decide what your color is to be, and where it is to go. Then mix it as you want it, lay it on courageously and let it alone. If it is not right, daubing will not help it. If an entire failure, scrape it off and try again. If corrections are to be made by over-painting, only make them when the painting is dry or nearly so. As a general principle, do not work into wet color. It is sometimes impossible to avoid, and when necessary, should always be done with deliberation and carefulness.

Use always an ample quantity of paint. While it is a slower process, it is best to mix the colors specially for every brush stroke, as the variety of tone and value which comes of mixing new color for every touch of the brush is in itself a charm in painting, aside from the greater purity and truth you obtain by it.



Be satisfied only with the best you are capable of. Do not be afraid to put on paint over dry paint until it is right. When the effect looks right to you, and you cannot recognize the difference between what is on the canvas and your ideal of what should be there, you will have done your best.

The paint may sometimes be laid loosely on the canvas with a long brush dragged over it in a manner to let the under painting show through the loose texture of paint above. Effects are often obtained in this way that cannot be had otherwise. Solid color, in general, is used for this.

Breadth and detail are to be considered. Messonier and Alma Tadmara are masters of detail, and in relation to it a study of their works is beneficial. In large canvases detail is out of place, allowable only in proportion to their size. Largeness and breadth of execution are demanded in a picture to be seen from a distance or to fill wall space, while a small canvas or panel will admit of microscopic elaboration. In broad painting the main things are emphasized, and only such detail is rendered as seems necessary in relation of parts to the whole.

When a painting appears too cold or too sharp in color or drawing after it is completed and well dried, the color and effect may be improved by scumbling. This process consists of rubbing a mixture of body color without thinning, over the surface of the picture. Rub it on with a short brush slightly charged with the color, which should be yellow, if a warmer effect is desired. A hazy appearance will result from much scumbling, making the picture vague and soft. If too much blurred, paint into it with firm colors. Pictures on which this process has been used should be varnished afterwards, as the rubbing in of the color will impart a dead look to the canvas.

Glazing, which is the reverse of scumbling, is a very valuable process, much used by Italian painters, and an essential part of their system of coloring. The rich coloring and jewel-like qualities of Titian, Raphael, and the early German painters are impossible without some form of glazing. It is a thin wash of transparent color *flowed* over the under painting, not *rubbed* on like scumbling. It is thinned with a vehicle that is either



oil or varnish. By glazing, a picture gains in brilliancy, force, and harmony, and it is in use by all schools to a greater or less extent. Always glaze with a darker tint upon a lighter one, and use only permanent colors. Be sure the under painting is well dried. If the under painting seems too hard, go over it with a little thin, quick-drying varnish and glaze into that. The varnish will hold the two coats of paint together. Parkhurst says: "It would be wise never to use a glaze as a final process. Use it to get or modify a tone, but paint into the glaze with body color and you will keep the advantage of the glaze without the disadvantages, and the picture has a more solid effect of painting."

After glazing, as well as after scumbling, a picture should be varnished to keep it fresh and brilliant, always allowing sufficient time for a thorough drying of the work beforehand. From four to six months is required for this.

#### METHODS OF EMINENT PAINTERS

From "Field's Chromotography," which gives information in regard to the chemical constitution of colors and their durability, we find the following from lessons by Rubens:

"Paint your shadows lightly, letting no white glide into them for fear of their being heavy and leaden. Load the lights with opaque color, keeping the tones pure. Lay each tint in its right place, and later melt them into each other by lightly blending them with a brush. On this preparation may be given those decided touches which are the distinguishing marks of a great master."

"Paint your lights white, place next yellow; then red, using dark red as it passes into shadow. Then with a brush filled with cool gray, pass gently over the whole until they are tempered and sweetened to the tone you wish." For instance, take white; then cool lemon yellow or warm Naples yellow, then cool or warm vermilion broken into shadow with madder lake. For the cool gray, ultramarine ash may be used.

In the matter of processes, no two masters agree. The following is believed to have been in use by Paul Veronese:

Cover canvas with white, light red, and a little ivory black. Get a cool, gray tone. When dry, put in your painting with light red and cork black in the shadows. To hurry the drying of it, scrape it down flatly. Leave it vague and broad. On this put great sweeps of color rather thinly.

### THE SECRET OF THE OLD MASTERS

Albert Abendschein, in his work, "The Secret of the Old Masters," says: "There is no doubt they all used a white ground, or their work would not have survived." "The luminous fresh colors" of Rubens' paintings are said to be largely due to the absolutely white ground they were painted on. "The end sought was that as each layer became more transparent the white ground should finally lend its subdued light to the mellowed painting." Pure white grounds, however, are very trying to the eyes. To avoid this, Rubens, and others of the Old Masters, adopted a device of covering the surface of the canvas with a thin, transparent, flat and even stain, composed of much medium and a very small quantity of one or two colors of thin dark body, like raw umber, raw sienna, ultramarine, the madders, bone brown, ivory black, and others. To this use of a white surface to paint on, with pure oil as medium and drying of the completed picture in the sunlight until all superfluous oil was burned away, this author attributes the marvelous preservation through the centuries of the brilliant and beautiful coloring seen to-day in the works of the Old Masters, which has become to us a lost art. Abendschein claims also, that there exists "a magical chemical action of the sunlight which preserved and increased their color and prevented by the drying out of the oil the inevitable darkening" to which all modern pictures are more or less liable. "The fierce white light of the sun is the magician." If it is true, then a discovery has been made which is of the utmost importance to modern art and art workers. Painting in oil has been known only about four hundred years, and is not to-day so successfully practiced as in its earliest history, though our mechanical means are much greater. Some essential secret has been lost. It is not impossible that it has been re-discovered.

## FLOWER AND STILL LIFE PAINTING IN OIL

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THE same materials and implements used for landscape painting in oil are required for the painting of flowers in oil colors. Therefore, it is useless to repeat the enumeration of them. The same rules as to light, position of easel, and manipulation are to be observed, and technical terms, such as glazing, scumbling, impasting, and handling, have the same meaning applied to different subjects. Therefore, no detailed description, which would be a useless repetition, will be given here. Many of the ways spoken of with reference to landscape or general painting in oil are equally applicable to the painting of flowers in oil. It is presumed that the student is sufficiently expert in drawing to be qualified to sketch accurately the objects he wishes to paint. Drawings done with pencil or sepia and studies in monochrome in oil colors are valuable, and should be continued during the whole course of practice of this art.

The best background for flower pictures in oil are those with a surface perfectly white and dense, and capable of the utmost reflecting power. If there are several coats of white lead on top of the usual preparation for a canvas, it will be all the better. The lead used may be mixed with a little slow-drying copal varnish; this will give elasticity to the white lead and no discoloration will result. However, the canvas is generally used by the amateur student exactly as it comes from the dealer, and is almost invariably a light gray in color, which being a middle tint, is very well adapted for the studies made during the first stages of practice when "learning to paint." Later, after the student becomes able to produce work worthy of preservation, the white ground should be used in every instance.

Compose your tints of the fewest colors possible, and mix them on the palette before beginning work, as flowers are constantly moving and

cannot be rearranged. In this respect flower painting from nature differs from every other pictorial art. Work cannot be continued on one



subject from day to day, but must be finished at one sitting, hence the utmost speed which is consistent with careful execution must be acquired, or a succession of flowers of the same kinds must be provided, to be substituted as the previous ones fade. Arrange your colors on the outer edge

of the palette, except white, which should be placed in the middle.

#### PALETTE FOR FLOWERS

White	Ultramarine	Strontian Yellow
Orange Vermilion	Emerald Green	Cadmium Yellow
Pink Madder	Deep Cadmium	Yellow Ochre
Rose Madder	Madder Carmine	Cobalt
Light Red	Veridian	Pale Cadmium
Chinese Vermilion	Purple Madder	Raw Ūmber

The colors used for flower painting must not only be capable of the most exquisite and delicate gradation of tints, but the whole range must be harmonious. There should be no color on the palette, which if used in any part of the picture would put it out of key. Browns are dangerous in this regard. Be chary in the use of them. The effect will be better if you mix all your greens from the yellows and blues. There will not be so much likelihood of your using a color in a leaf which is not in tone with the flower. Study carefully the harmonies of color, and the mixing of pure colors to make gray. You will not need all these colors at the same time. There are flowers whose depth, brilliancy, and richness can only be obtained by some of them. Experience and practice will teach you



how to proportion the number. You will find in the palette given every color needed for painting flowers; where others are named in the following pages for certain flowers, the tints can be used at discretion, or they can be made by combination of those in the palette that are given in the list. For instance, black is mixed with ultramarine and rose madder, with a little veridian added if the color is too purple. The result will be a black with daylight and vibration in it. No blacks or browns are included in the list, because they will tone in better with the picture if made by mixing the purer pigments, but the blue black and ivory black can be used if the student prefers, or is doubtful of his ability to make the proper combinations at first. So also with the Vandyke brown and other browns. It is for this reason that these colors are named among those appropriate for foliage and the different flowers in the following pages. The ready-to-use colors are easiest for the amateur, but he should study the combinations assiduously as he advances in practice, until certainty and facility are acquired, when he will make and use them habitually.

Emerald green is a very vivid, light green and must be used with caution and in small quantities, as it tones down by contrast every other green in the picture. But there are places where it is needed and very effective. It is especially useful in sketching in color.

### GENERAL PRINCIPLES AND RULES

The values in flowers are so infinitely delicate and subtle, their changes so rapid, making it impossible to complete a group at a single sitting, that the flower painter has some peculiar difficulties to deal with, which are not present in other kinds of painting. Since the models must be changed, perhaps several times, before any group or, sometimes, even a single flower, can be completed, it is essential to consider the subject first as a whole. Omit all small details and personal accents in the first painting and render only what is common to the whole group. Get the general outline and forms, and express vaguely the lights, and the darks which fall between the flowers. The latter should not be emphasized,



because they will have to be changed to some degree in the after painting. If you have their values correctly the larger accents of color will fall more naturally into place. As the flowers fade and alter in position, substitute fresh ones, one or two at a time in different parts of the picture. On these you can work more closely in detail, proceeding from general to particular. Finally, from the last renewed flowers put in the individual and finishing touches. Time is required, but it is only in this way that a flower picture can be rendered from nature. If you love flowers, the difficulties will not discourage you, and there will come with practice and feeling the ability to represent correctly the character and quality of these most beautiful objects of nature.

There are few people who can paint flowers well. Most of the so-called paintings in this line are calculated to give the genuine artist in flowers a spell of nervous prostration at sight. The idea that flower painting is easy is a fallacy. This is one of the most difficult of arts, because, while so exquisite in form and color, they are equally delicate in substance and sentiment. These qualities are to be considered in the largest degree. Heavy, solid painting must be avoided, also too much elaboration. If the whole character of a group is to be seen at a glance, make the details subordinate; suggest them only, always making the less express the greater. If detail is important to expression render it faithfully. When there is doubt make the painting more delicate, but never weak in color. The brightest pigments never equal the natural tints of flowers, therefore the artist must use his most brilliant colors for their hues, and call to his aid all the effects of contrast to enhance their values.

Black will be the least useful color on the palette. Obtain your grays, as a rule, by mixing your richer colors. A gray in flowers is a shadow on rich color and is not to be rendered by negation, but by modification or refinement of color. It partakes always of the local color of the flower. In a pink rose the high lights will appear lighter than the actual tone of the petals where they appear, and the next deeper tints will be more apt to show the real color, while the shadows in the curves and between the petals

will be more of an intensified pink than a gray. In the middle of the rose the smaller deep shadows will be red. Wholly gray shadows will be found only on the side of the flower where the light is entirely cut off. It will be seen, therefore, that flowers require to be shaded mainly with their own color, instead of gray. Grays are essential, but must be used with proper discrimination.

The student should make sketches and studies in color constantly, and carry the painting of groups or single flowers as far as possible in a sitting of an hour. Practice getting effects of detail with little actual painting of it, and apply what you learn in your pictures, where there will be more difficult combinations. It is best not to work more than two hours at a time in making these studies and essay only what can be completed in that time.

When there are still life objects in the picture, as vases, drapery, or others, rub in only the main colors and values at first, leaving the painting until the flowers are complete, because these will not move and change like the flowers. It should be remembered that when still life is used with flowers it must be kept subordinate to the main *motif*, and every striking detail and decoration toned down. Otherwise it will lower the values of the principal subjects. In the example of a yellow bowl with purple violets do not have the yellow of the bowl as bright as the purple of the flowers. Use yellow and brown ochres for the bowl, these pigments being so dull in quality that while they preserve the complementary color scheme they do not rival the flowers. The background, also, must not be too emphatic. What it should be will depend upon the individual peculiarities of the subject. Gray, olive, and dull green tints are artistic and nearly always satisfactory, as they harmonize with almost everything. A bright tone will kill the effect of the flowers and leaves and take away atmospheric qualities. Do not make the background too dark for light flowers, or it will lessen the value of the shadows in the flowers and foliage and weaken them. On the other hand it must not be too light, or there will be offered a lack of contrast.

For the same reason, dark backgrounds must not be used for dark flowers. After the whole composition has been definitely established on the canvas, the background, first laid in lightly, may be darkened as much

as proves to be necessary to give a proper effect to the completed picture.

The best effects in flower painting are to be obtained by broad handling and absence of too much detail. A picture is not a work on botany, but relies for its charm as much on that which is skilfully suggested as for what is actually painted. For instance, in looking at a group of flowers in a vase, or a cluster growing on a bush, we see the coloring and general effect, but not the ribs and veins of the leaves without looking closely for them, and yet we know they exist, and the imagination supplies all that is needed to the perfect image. To cling to absolute verities, and laboriously render every small detail would be to destroy the truer values in the eye of the mind. Beautiful drapery or artistic vases will sometimes aid the effect of a picture, but such objects should never be obtrusive, or introduced without reason. Flowers thrown down on a simple surface, or even tumbling in wild confusion are much more effective than when surrounded by conventional accessories or arranged stiffly in a vase, their natural home being the field, garden, or wood, with nature alone for background and environment.

### PRACTICE IN FOLIAGE

In a flower painting the leaves or foliage, like still life, should be subordinate to the principal subject, the flowers, and therefore must never be painted in a high key of color. Make the blossoms conspicuous by rendering everything else rather quiet in tone. By subduing the greens of the foliage the value of the flowers is enhanced. It is well to make the painting of foliage a separate and careful study.

Select a group of leaves of a variety that is not liable to change for several hours, and place it in some fitting receptacle like a glass or vase which may form a pleasing addition to the study. Place on your palette the following colors:

White  
Cadmium Yellow  
Blue Black  
Light Red

Raw Umber  
Cobalt Blue  
Yellow Ochre  
Veridian

The common gray canvas will serve best for practice in foliage. Sketch in the outlines carefully with charcoal before beginning to paint. Mix your tints by combinations with white and render them as nearly like nature as possible. Begin with the yellow greens, light and dark, and finish with those composed more of black and white. For the shadows where they are darkest mix a little Raw Umber with Veridian. Decayed leaves may be painted with Light Red and one of the yellows, with some of the colors already named.

Thin your colors, if necessary, with linseed or poppy oil, with a little turpentine to aid in drying, the oils being slow dryers. Avoid the use of an excess of these mediums, as they tend to darken the picture in time. Too much turpentine will cause the colors to dry dead and without gloss. Varnishing will restore the brightness when this occurs.

#### RED AND PINK ROSES

Use the following colors for painting a red or pink rose:

Rose Madder	Cadmium Yellow
Pink Madder	Blue Black
Madder Carmine	Cobalt Blue
Zinc White	Vermilion

The ground should be pure white. Mix the madders with copal varnish and glaze over it to the thickness necessary for the brightest hues. Form tints also by the mixture of zinc white with the brightest madders. Madders do not combine well with flake white, having a tendency to change when mixed with an opaque pigment. The purest madders will change in a day when mixed with flake white. The pink tints of a rose can sometimes be obtained very nearly with the deepest vermilion and either flake or zinc white and are permanent, though they may not be altogether satisfactory. Even those produced by madders and zinc white may change so much in time that their resemblance to nature will be more distant than tints obtained by vermilion and white.

For grays of a pink rose, when, as is seldom, pure gray is required, Blue black and white will be found sufficient. Cobalt blue, in addition



to the vermilion referred to, may be necessary occasionally. Remember that flowers require to be shaded mainly with their own color, a gray in flowers, being a shadow on rich color, always partakes more or less of the local tint, except on the side where light is entirely cut off. This has been stated heretofore, but may well be repeated, as it is an important principle.

For the deeper colored roses, the vermilions and madders should be used without white. It is often best first to color the underground with vermilion and white, letting it become quite dry before beginning to paint the rose upon it.

Yellow and even green tints will be found in many red and pink roses, which may be made by yellow cadmium, cobalt blue, and white. Ultramarine blue may be used with the darkest madders for the shadows of the deeper flowers. Yellow roses, such as the Gloire de Dijon and Marshal Neil, do not require the use of the madders. The vermilions, with the cadmium, yellow ochre, and zinc white, should be used for the Gloire de Dijon, and the same colors with the vermilion afterwards for the Marshal Neil. The green tints in these flowers are painted with the addition of cobalt blue and blue black.

For foliage, cadmium, yellow ochre, cobalt, blue black, and some of the browns, with the addition of white for the lighter greens, supply a large range of valuable hues. Veridian, and ultramarine blues are also very useful for obtaining the brighter and bluer greens, and with yellow furnish charming tints of green which are fairly permanent. For the glossy surface of leaves, a mixture of blue black and white is nearly sufficient. An addition of the greens mixed for the local color of the leaves may sometimes be needed.

All these colors in varied quantity give an abundant variety of hues for foliage which are true to nature and perfectly permanent.

#### WHITE ROSES

For painting white roses the following colors are best adapted for use.

White	Cadmium Yellow	Blue Black
Yellow Ochre	Raw Umber	Ivory Black



After the white has been brought to a proper consistency with poppy oil, the tints should be formed as follows:

Three tints varying in depth, made with raw umber, blue black, and white. Three tints made with yellow ochre, blue black, and white. Three very light tints made with ivory black, cadmium yellow, and white. One tint for the brightest lights, made with white slightly tinted with cadmium yellow.

It is always better to use a white ground for flower painting rather than the light gray color usually adopted by amateurs; for white or light colored flowers it is especially necessary. The centre of the flower in light, if seen in front, should be first outlined with one of the light gray tints. The outline and the painting of the rose should proceed together, as it is likely the flower may move rapidly. Every part must be finished as the work progresses, until the outer edge of the rose is reached. The work should then be looked over, when perhaps corrections can be made before the flower entirely changes its position. This will be sufficient for one day's work. The next day a rose in shadow must be painted with the darkest tints alluded to, making what changes in them may be necessary in imitation of the flower. It is always desirable to mix fresh tints for each day's work, for it is no real economy to work with colors mixed the day previous, as they would probably be half dry.

The foliage must now be added to the flowers, and this will probably occupy another day to finish properly. The background must be painted in between the forms, as in the previous studies, and of a color and depth suited to the subject. Do not make it too dark in tone for these delicate flowers or it will nullify the shadows in them, nor yet too light, which would not afford sufficient contrast.

#### ORANGE AND BROWN FLOWERS

Cadmium yellow or Strontian yellow will serve for the yellows in the lighter parts of these flowers. Paint the darker parts with rose madder, brown madder, Vandyke brown, — or make the brown by combination, —

yellow ochre, and blue black. Use cadmium yellow, blue black, cobalt, and white for the foliage.

### BLUE FLOWERS

The ground should be pure white, and the local color of the flower must be glazed over it, using ultramarine and cobalt separately and in combination, the white ground showing through to give brilliancy. When expense need not be considered, the real ultramarine — lapis lazuli — is preferable to the artificial ones, which are less clear and vivid, though the French ultramarine is a splendid deep blue, and a good substitute. In the deep shadows use the full strength of the ultramarine, adding purple madder and sometimes a little ivory black, or a black made by combining rose madder and ultramarine, which is better. Imitate the lighter parts of the flower and transmitted lights by glazing over the white ground with the pure blue color. White in combination with blue must be avoided when a pure color is required, as the quality of blue changes entirely by the addition of white, and loses richness. It is no longer blue, but blue gray. The greenish yellow tint often seen near the center of the flowers may be produced by cadmium yellow, a very little black, and white. In the deepest recesses of the foliage, use Vandyke brown, or a brown made by combinations, but do not mix Vandyke Brown with any other color except for glazing over dry colors, and then use it only with transparent colors.

When the tint of the flower verges into purple, rose madder may be added according to tint required. Some of the turquoise blue flowers, such as the for-get-me-not, the pale larkspur, and the corn flower, are best imitated with cerulean blue. Tints vary much in the larkspur, some being of a pure blue color, while others in the same flower are of a dull rose pink. These may be painted either with vermilion and white, or rose madder and white. The formula given for painting foliage may be referred to and used with small variations of colors for the foliage of all flowers. Add more or less yellow and white as required. Do not make your dark shadows in leaves too green. The greens in shadow generally have a brown hue.

Care must be exercised that the brown is not of a tint to throw the whole picture out of key, as browns are liable to do if not in harmony, or complementary to the color scheme of the whole.

### RED FLOWERS — THE SCARLET POPPY

This flower changes so rapidly as soon as it is gathered that all preparation of materials and mixing of tints should be made before it is brought into the studio. While a charming subject, the harmony and contrast of the foliage with the flower being perfect, it is very difficult to paint for this reason. In an exceedingly short time it fades altogether and cannot be restored.

The appropriate colors are:

Orange Vermilion	Rose Madder
Chinese Vermilion	Purple Madder
White	Madder Carmine

The orange vermilion is used to obtain the reflected and transmitted lights and white to lighten some of the tints. The darkest colors, which are found at the base of the petals and in the stamens of the poppy, should be painted with purple madder and cobalt, or ultramarine blue in combination. A little white and blue black may sometimes be added in the variations of shadow. The light sheeny gloss so peculiar to the flower may be produced with blue black and rose madder or vermilion and white.

These colors are equally suitable for the painting of the poinsetta and all other red flowers that are near in color to the red poppy, with whatever modifications may be required in accordance with variations of nature.

### YELLOW FLOWERS

The colors best adapted for yellow flowers are as follows:

Yellow Ochre	Raw Umber
Cadmium Yellow	Blue Black
Strontian Yellow	Cobalt Blue
Deep Cadmium	White

Pale Cadmium

The ground should be quite white to give the proper refracting surface for yellow flowers. Outline the flowers carefully with pale cadmium and glaze the outer edges of the petals with yellow cadmium applied thinly. Paint the brightest lights with strontian yellow or pale cadmium. The remainder of the bright tints can be obtained by the deeper cadmiums. The shadows are produced with yellow ochre, raw umber, and blue black combined with white for the gradations required. Touch in the deepest small shadows with the darkest cadmiums and light red. Paint the foliage with combinations of greens, directions for which are given elsewhere.

### STILL LIFE

The painting of objects of still life, by which term is meant the grouping of inanimate subjects, is the least difficult form of study for the amateur, because he can arrange and rearrange them as best suits his ideas of composition in a way that cannot be done with living models. It is a useful and convenient mode of practice in which all manner of things, not necessarily expensive, but which must be good in line, proportion and color are available. The student should make a collection of books, plaques, vases, jugs, glass, metal, draperies, etc., from which to compose his studies. A ten-cent Japanese vase may be an example of genuine art and form an admirable adjunct in a picture.

Draperies are an essential and interesting line of study in still life painting. They should be of a considerable variety of texture and color, that dexterity in representing different fabrics may be gained. If intended only for a background against which other objects are to be given prominence, drapery should not be painted with pronounced surface qualities or brilliant color, as it would detract from the main *motif* of the picture. Old and faded cloths sometimes make beautiful backgrounds for highly colored subjects and are found very useful because of their unobtrusiveness.

In still life painting there is the advantage that the brush can be laid down at convenience with the comfortable assurance that your models will not change until you are ready to resume; this fact removing much of the difficulty which attaches to other forms of work.



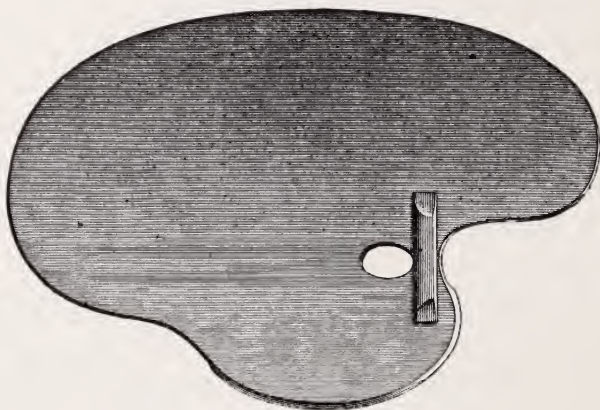
Begin your picture with a careful outline on the canvas with charcoal. Render the modeling and values by as much shading as seems necessary, being particular to get the details of form and proportion correctly. Place in the background where the composition shows against it but without completing it to the farthest lines of the canvas. Keep the most important planes well defined but simple. When finished the drawing may be fixed with a fixative and atomizer, which articles can be obtained from any dealer in art materials. The colors heretofore given as suitable for painting in monochrome are the best to use in laying in the first coloring, which should be very thin, leaving the canvas unpainted where the high lights are to appear. If you do not wish to render the first painting in monochrome, a thin mixture of colors nearly like those intended for the finishing painting may be used but it must not be strong nor solidly applied. When the first painting is dry commence with the solid or body color and place in the values of the lights and shades. In still life work as in other oil painting very rich effects may sometimes be gained by loading the lights and painting the shadows thinly. After some facility has been acquired the student may practice this method or any other he prefers; the first end to be attained is a mastery of his materials, the ability to locate the proper colors and values in the right places, when everything else will fall naturally into line. Think carefully about every stroke of the brush before it is applied to the canvas, and endeavor to get color and value at once, which saves time and useless labor. Have a firm conception of what you wish to do and work it out without vagueness or indecision and your canvas will reflect the attitude of your mind.

In grouping your subjects do not crowd or huddle many of them together in a characterless mass. Use only such as have a logical reason for juxtaposition. Let there be a *raison de'être*, a probability and reasonableness in conception and color. Try only simple combinations at first. An interesting picture may be made with but two objects in it, but they must have some sensible relation to each other.

In this manner composition is to be studied in still life, exercising your best judgment in grouping objects together with due regard for the elements



of unity, balance, and line. Use the same processes in large measure that are spoken of in instructions for other kinds of oil painting, many of them being equally adaptable for this. Still life, for the study of texture, color, light, and surface effects makes all other branches easier from the facility and convenience with which it may be practiced. There may be a large latitude in handling different subjects. It is not well to paint always in the same way. The student may try all things and hold fast to that which he finds good, as the best and most adequate expression of his ideal.



ARM PALETTE

## LANDSCAPE PAINTING IN WATER-COLORS

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THE instructions given in the following pages will enable the student to choose his necessary materials for water-color painting with judgment and discrimination. A few colors well selected, water-color paper or drawing board of standard make, brushes, pencils, and other articles needed do not involve a large outlay in the beginning, and should be of good quality in order to secure the best results. There is no need to lay in a large stock of high-priced colors, only a few of them being really requisite, many of the most generally useful paints being of medium cost. An ample palette is given of the most permanent and essential colors for all-round purposes and their properties are described. A complete list of all known colors could be of no benefit and would only tend to confuse the beginner.

In water-color painting it is essential that the pupil should be fairly well grounded in technique by practicing from the flat, or copying, before he essays the round, or painting from nature. In the latter there comes in the "fourth dimension," that is, measuring the values by your eye and without mechanical aid, the difficulties of which will seem insurmountable, if attempted from the first.

Therefore, the first procedure should be copying of simple studies. There are various water-color facsimiles published by art journals and lithographers that answer the purpose very well. Large pictures or those in which there is much detail should not be ventured until some knowledge and certainty of methods have been attained. Make first a clear outline sketch in pencil, which must be light and delicate to avoid an admixture of black lead in your water-color washes. The shadows need not be outlined, only the general forms of the main features of the study.

In laying on the color washes the student should always consider carefully just what he intends to do, and having made up his mind, go ahead and do it boldly. Mistakes in water-color cannot be painted over or otherwise rectified as in oil color, therefore they are more serious, but each one

will teach a definite lesson, and through them the pupil will learn. Nothing is gained by timidity or patchwork, which always causes muddiness and confusion. Color washes should be kept as clean and clear as possible. To this end it is important to keep the outfit of materials perfectly clean. Wash the paint box, slab, and brushes often and change the water in the water glass at short intervals. This will conduce very much to maintaining the purity of the color.

It is presumed that the student is able to draw fairly well, with which understanding all instructions will be given. Let us first consider the material on which the work is to be done, the paper.

#### PAPER

The best material for the general work of the water-color painter is the paper known as "Whatman's." Very new paper is not so good as that a couple of years old. Look at the date in the water mark, and always use the side which presents the water mark the readable way.

TO STRETCH WATER-COLOR PAPER. For drawings of any size, you must strain or stretch your paper over a drawing board to keep flat. Some artists begin their work on loose unstretched paper, preferring to lay it down later on another sheet which has been stretched on a board to take it; others prefer to work on strained paper from the first, and you will settle this for yourself as you get experience, but it will be well that you should know how to stretch your paper in the right way, as it is a process which is often inaccurately done.

Wet your paper thoroughly on both sides, let it lie two or three minutes in water; then take it out carefully, holding it at one end so that it will not bend over and crack the surface; roll it up and leave it for ten minutes so that it may be saturated equally. When you unroll it, it should lie quite flat, then lay it upon a clean drawing board or table larger than itself. Place the drawing board which is to take it on the top of the paper, leaving the margin to turn over about equal all around. Cut off the corners so as not to tear them, very thoroughly wipe the projecting margins with a clean cloth, and remove as much moisture from them as possible. This is the

most important thing in the whole process. The principle of stretching paper is that the edges must dry before the center; otherwise the drying and contracting center will tear the edges away from their hold upon the board before they are firmly fixed. Apply some strong paste to the projecting edges of the paper and on the board itself where the edges are coming, and where the edges turn sharply over the sides of the board. Do not leave too much paste between the paper and board. It is well to squeeze out as much as will come away with the edge of a strong paper knife. Place the board with the paper uppermost on a box or something that will allow the air to get freely to the under side.

Heavy paper well stretched will give the best results, with one exception. This is in favor of what is called water-color board, which consists of water-color paper smoothly mounted on very heavy pasteboard. It is for sale, ready prepared, at any art material shop, and comes in pieces twenty-two inches wide and thirty inches long, but is easily divided with a sharp knife into sizes required. It affords by far the most satisfactory surface on which to work, as it never buckles, puffs, or wrinkles, as even the stretched paper will sometimes do, and therefore takes the color washes with more evenness.

It is not advisable for a painter to mount his own paper. It is better to get it ready prepared from the dealer, and nearly as cheap. The student is not advised to use water-color board at first; though not very costly, it is too expensive to waste. At the beginning of practice he will spoil a great deal of paper. When he is farther advanced he will do well to adopt water-color board entirely for his work.

Another matter to be thought of is the cleanliness of the surface on which you are to paint. All paper has been handled more or less, and every touch will leave a trace of oiliness, as may frequently be observed in writing a letter. The ink remains without absorption when it reaches a place where the hand may have rested a moment. So on water-color paper, though invisible, the spots will not take the color perfectly. To obviate this difficulty, sponge the paper lightly with clear water about an hour before it is to be used. This takes away the extraneous matter and opens the grain of

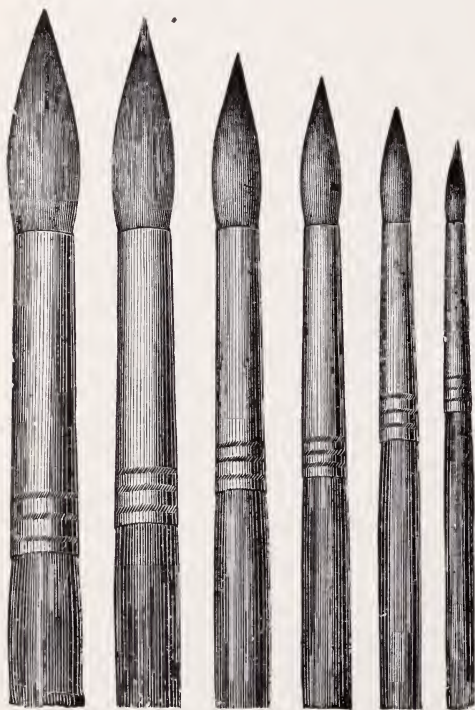


the paper, insuring a clean receptive surface. Do this before making the sketch, as the water will render the pencil marks indelible and they will show in the finished picture. Also, do not use an eraser while the paper is wet, even though it may be of the softest kind. It must be entirely dry before being touched with rubber or a flaw will be created that will be conspicuous when color is washed over it. The effect is still worse when a damp wash of color is rubbed. It is needless to add that the hand should touch the paper as little as possible while work is being done, and should never be rubbed across it.

### BRUSHES

Water-color brushes are made of camel's hair, red sable, and brown

sable. The camels hair brushes, which are the cheapest, are too weak and soft for general purposes. The brown sable brushes are most expensive, and the student can choose whether he will select those, or the less costly brushes made of red sable, which are substantial, serviceable, and will answer every purpose. For flowers, fruit, and still life work, two large round ones will be sufficient, though it is well to provide yourself with two or three more as soon as you feel that you can afford them. For figures, two small round ones will be required in addition to these. These red sable brushes will also answer for marines and landscapes. For the last named class of painting, an ordinary flat, bristle brush of medium size, such as is made for

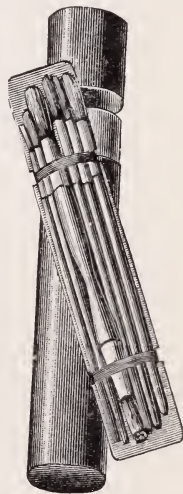


RED SABLE BRUSHES FOR WATER-COLOR PAINTING

the use of oil painters, will also be found of service. Test brushes carefully before buying; hold a sable brush in water until saturated, and then withdraw. If on being lightly smoothed to a point with the fingers, it splits, looks blunt, or shows hairs which have a tendency to separate from the body of the brush, reject it. It should be full and solid at the top and in the middle, and taper quickly to a fine, symmetrical point.

Use large brushes as a rule. Little brushes are meant only for occasional use in small details. There are several good reasons for using large brushes instead of small ones. They have more spring; the flow of colors is smoother and more continuous, a larger amount of surface can be covered at a time, obtaining increased evenness of tint, and a firmer and bolder method of painting is acquired, that cannot be obtained by the use of small brushes, which limit the power of expression, and induce a cramped style of work.

Brushes should be kept clean and well cared for. When necessary to carry them, they can be placed in a japanned case made for the purpose. that has a slide provided with elastic straps which hold the brushes so that they cannot slip against the ends of the case. A brush should never be permitted to rest on its tip, either in or out of water, the point being destroyed thereby. Nor should it remain in water for any length of time. In taking paint out of pans, do not put the brush into them, but place it in the middle and draw it backward. Always encourage the tendency of the hairs to come together at the point. After the brush has been used, wash out all the color in clean water, wipe with a soft rag, and bring the hairs to a point. Let it dry in that shape. A good way to keep them when not in use is to stand them on the end of the handle in a vase or jar deep enough to hold them in an upright position.



## COLORS

No two painters ever use quite the same palette. A painter's "palette," or set of colors, is generally the result of his own experience and

practice. One will use as many as five and twenty colors, another will use only eight or ten, and find in them all the variety he needs. Experience is usually towards discarding many colors and reducing the number used.

The following list of twenty-six colors is one which will be found ample for all practical purposes.

Aureolin	Hooker's Green No. 2	Rose Madder
Pale Cadmium	Indigo	Light Red
Orange Cadmium	Prussian Blue	Indian Red
Indian Yellow	French Blue	Carmine
Yellow Ochre	New Blue	Burnt Carmine
Emerald Green	Permanent Violet	Burnt Sienna
Purple Madder	Brown Ochre	Raw Umber
Burnt Umber	Vandyke Brown	Brown Madder
Sepia	Chinese White	

Water colors come in three forms, — in dry cakes, in china pans, and metal tubes like oil colors. The pan colors are for various reasons most satisfactory, as they are sufficiently moist to work easily, and are in small compass. The half pan sizes are recommended, as they take up less room, are renewed oftener, and it is more pleasant to use fresh color than that which has been open for some time. If one or two special colors are consumed in larger quantity than the rest, these may be bought in whole pans. It is best to always use the rose madder and chinese white that come in tubes; the rose madder because it is a gummy color that dries and hardens rapidly on exposure to the air; the chinese white, because it is rarely used and must be perfectly soft and creamy when it is required. The softer the conditions of the paints,



REGULAR SIZE  
TUBE



HALF PAN



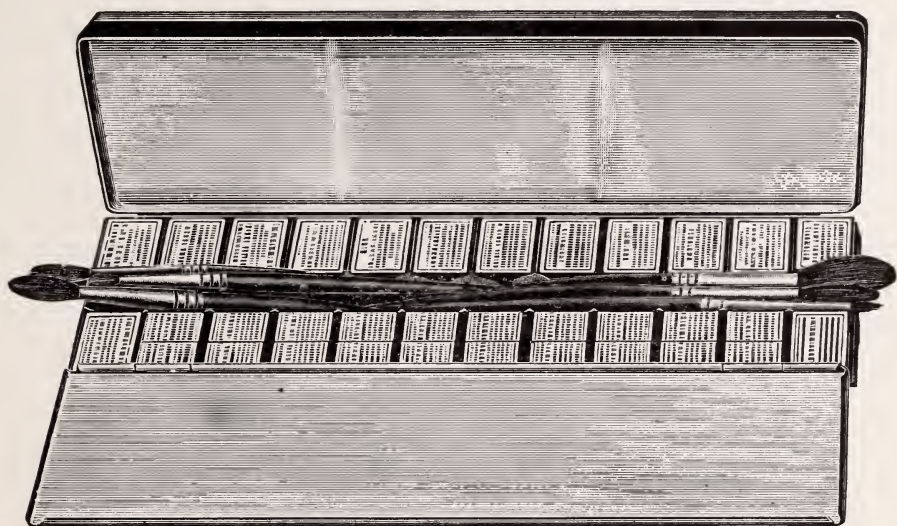
WHOLE PAN

the better they are in working facility. When they are used every day the addition of a

few drops of water to each pan is advisable. If they are used only



occasionally and have time to dry in the intervals, the excessive wetting causes them to crack and crumble into hard lumps. If colors are to be laid aside for a considerable time, a drop of glycerine added to each will help to keep them moist. When the paint box is not in use, it should be kept tightly closed, to exclude dust and air.



COLOR BOX, FITTED

A japanned metal box, large enough to hold all the colors comfortably, should be provided, with compartments for whole pans. Two half pans can be fitted into a compartment, and it will carry whole pans on occasion. The student should learn to distinguish the colors by name; a difficult thing to do immediately, as different depths of washes of the same paint seem to the inexperienced eye to be made with different colors. He must become acquainted with his palette, to acquire a sense of certainty in his work. Memorizing will be less difficult if colors are kept in the same order, each in the compartment where it is always to be found. The chromatic succession is the best and simplest arrangement. Beginning with the yellows, because they are the lightest and most brilliant,



they should be placed all together, next to them coming the group of greens, then the blues, then the purples, then the reds, and last the browns.

An artist must learn the peculiar properties of each color; its luminousness, flatness, transparency, atmosphere, or distance, that he may know how to use them in the proper way. The list of twenty-six colors given includes colors which represent all these qualities and is an ample palette for landscape and still life work, as well as for flowers; all which are absolutely necessary for all-round use are included.

The palette given is intended for a general one for all the uses mentioned for water color in this book, and the preponderance of brilliant colors is due to the fact that flowers cannot be painted without them, while subdued tints are easily made by combining bright colors, as red and blue to make gray. You cannot combine subdued colors and obtain bright ones. Therefore, the vivid colors include the rest and cannot be dispensed with.

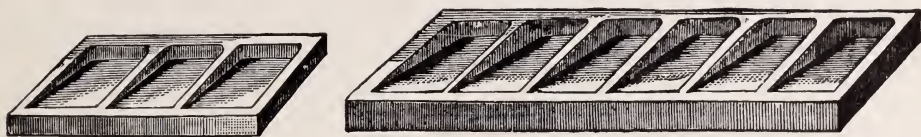
### DRAWING PENCILS

The drawing of a pencil outline is the first step in making a water-color picture. Two lead pencils of the best grade will be required. Keep sharpened to a fine point and discard them when they grow short, as you must have a long pencil to draw boldly and freely. A hard quality 3 H. or 4 H. is required for flower and still life outlines and small details, while for general figure work and blocking in landscapes and marines, a softer pencil is more adapted for the work, though it must not be too soft. An H. will answer the purpose very well. Regular drawing pencils are recommended, as they are smoother and more even in quality than the cheaper ordinary pencil.

Erasers that are not too hard will be needed, as care must be exercised not to abrade the surface of the paper, thereby making flaws that will be obvious when color is washed over them. Provide a piece of pure, black India rubber, soft and pliable, for erasing small lead marks and cleaning narrow spaces where it is not desired to erase contiguous lines.

A China slab with depressions in it to hold the color, is necessary.

One with six divisions will be found most convenient. A glass for water will be needed. An ordinary large tumbler will serve.



A small sponge should be added to the outfit, one not larger than a walnut before it is wet. It should be very fine and soft, free from every trace of roughness, and of a triangular shape, coming to a sharp point. This is used to take out high lights, wipe away small mistakes, and for all sorts of delicate uses in removing extra color from the paper. Have a coarser, larger sponge for washing the paint box and slab. Keep the sponges clean. Wash often and never allow paint to remain in them, nor any vestige of soap or oil. Have also an ample supply of large, clean, white rags, the older and softer the better. These are used to wipe the superfluous moisture from the brushes.

In choosing an easel, it is well to get a small, light one, that can be folded into a compact and portable shape. Large, substantial easels, such as required for heavy oil canvases are not needed.

A few sheets of white blotting paper and a sharp penknife complete the list of materials. The blotting paper is for occasional use in taking up paint when too much has been put on the paper. The knife is for sharpening pencils. A pair of scissors will also be a convenient addition to the list.

#### ADAPTABILITY OF COLORS FOR DIFFERENT EFFECTS

Bright colors should be employed for sunny midday effects, the more subdued ones for morning and evening views. Blue and purple give distance; reds, browns, and moderate greens are useful for middle planes; the vivid greens and yellows with the sharp contrasts should be used in the foreground, as they are "advancing colors" toward the eye.

*Aureolin* has a luminous quality which makes it valuable for effects

of brilliant sunshine and gorgeous sunset and sunrise skies. It may be employed alone or with the cadmiums.

*The cadmiums* should not appear in large quantities, as they are aggressive. Confine them generally to foregrounds, and as a rule avoid mixing them with other colors except aureolin and carmine.

*Indian yellow* is a most serviceable paint, giving clear and soft sunset and sunrise yellows, while for the coloring of green and autumnal grasses and foliage and water greens, it is very useful.

*Yellow ochre* gives good effects of distant sunlight on rocks or hills and is serviceable throughout the horizontal plane generally. It is not adapted for skies. Combined with new blue, it yields soft, quiet greens for shadowy foliage in the middle distance and autumnal scenes.

*Emerald green* must be used entirely pure and in small quantity. It may be made extremely effective in skies in pale washes, and for foregrounds of pictures which are painted in a high key of color.

*Hooker's green No. 2*, combined with aureolin in light-toned washes is good for the transparent green of sunset effects. Alone or in combination, it is good for foliage, foregrounds and marines.

*Prussian blue* is an intense color. In a pure state, it is effective in the line of touches which are employed for broken color, in middle distance, or as an element in bright foliage and grass greens, or water and distance. In using Prussian blue in mixed tints add a very little at a time, and with caution, or it will overpower the color with which it is combined.

*Indigo* is not adapted to atmosphere, but is otherwise used like Prussian blue.

*French blue* is employed alone for skies and distance, or combined for purple tints. It is also of value for water.

*New blue* is one of the best colors for skies, either singly or mixed with Light red. With the latter it produces fine grays and purple tones for clouds and distances; for far away foliage and tree trunks, use the two in fine touches and mingle them on the paper. New blue with carmine gives aërial purples for clear delicate skies and distances.

*Permanent violet* is suitable for tiny touches of broken color. Rose madder is employed for pink skies, elsewhere its use had better be avoided.

*Carmine* is used for small touches of pure color and also for making purple. Scarlet lights are obtained by a strong mixture of carmine and orange cadmium. Pale washes may be used in quiet sunsets. It is a beautiful red, entirely free from brown or yellow.

*Light red* is a serviceable color almost everywhere, whether in buildings, autumn foliage, foreground touches, ruddy sails, or in light washes for evening skies. It makes fine grays in combination with other colors.

*Indian red* is good for general middle distance and foreground, but is too dull for skies.

*Burnt sienna* is valuable for foregrounds and middle distances. It is useful for buildings and autumnal foliage, and makes serviceable greens, with Hooker's green No. 2.

*Brown ochre* is similar to yellow ochre, but gives deeper tones.

*Vandyke brown*, sepia, and the two umbers are used for various purposes where very dark tones are required, and for brown effects in foreground shadows, buildings, rocks, or tree tops.

*Chinese white* is seldom needed in ordinary landscape work, as it gives an extremely definite and solid effect and had better be avoided altogether, except where it serves to indicate points of high light so minute that it is impossible to paint around them and leave them represented by the white paper.

The foregoing gives only a general hint of the uses of particular colors and their most obvious purposes. Every artist has his own list of favorite colors, and many work with a small number. All that have been named will not be necessary for landscapes and marines, but from them the student can select those he finds best adapted to his purposes and individual needs.

## LANDSCAPES

Draw in the sketch for a landscape or marine view with very slight marks of the pencil. Indicate the line of the horizon and the most conspicuous objects, as trees, buildings, boats, and water. It is not necessary



to outline every detail; for instance, in delineating a tree, only the heavy masses of foliage need be outlined. Where the foliage is very thin and light it need not be sketched at all, but the trunks and branches should be lightly drawn. Dim and distant trees and other objects are not given, and there is no elaboration of detail.

In whatever sort of landscape you are painting, the sky should be first put in. It is better not to use an excess of water in dampening the paper. If there are brilliant indefinite cloud edges, trees, light colored sails, or other objects against the sky for which the paper must be kept white, in such portions of the picture leave the paper dry, or nearly so, as the color will creep over the surfaces, if wet.

Beginning at the top, the upper tint of the sky is painted in with a series of touches with the point of the brush working horizontally in the same direction. Use the color quite wet, and do not allow it to dry along the edges. Carry the color across the top in full strength and broad washes, but in the lower portions the color is diluted by dipping the brush in water until it becomes a pale tint at the horizon.

For a cloudless blue sky melting into pink at the horizon, after the upper part is put in, rinse your brush in clean water, then dip into the color for the lower part, which is worked in the same way, the edges of the upper part being kept moist enough to blend into the lower one. Always have plenty of color mixed beforehand. Do not have the color too wet or put on too much at a time. The painter must learn to have it under control, that it may always be perfectly clear and free from muddiness. This requires practice. It must also be remembered that when a wash is dry it is much paler in tone than when it is moist. Ground that is wet cannot be worked over; therefore, it is necessary to get it right in the first instance. Always allow for the drying out of the color. A beginner tries to make his wet wash match the picture he is copying, and it is hard to convince him that it must be much brighter. It is useful to every painter to keep spare bits of water-color paper beside his work and test every wash before he uses it in the picture.

Work the sky wash carefully around objects coming against the sky,

also around white clouds and the sun and moon; but when objects are darker than the sky, the wash may be carried down to the beginning of the horizon and softened off at that plane with clean water.

When the clouds are indistinct, without definite borders, but of delicately varied tint, dip your brush first in one color and carry a little of it along the paper, then in another which is allowed to run into the first and mingle with it. Remember to keep the edges constantly moist, as hard lines in a sky will spoil it. In the case of brilliant skies with blue or yellow spaces between the clouds, the latter are worked around these spaces which you should leave white, tinting them afterward. As a rule avoid sharp lines, which destroy the effect of atmosphere and distance.

The horizontal plane begins where the sky touches the earth. Commence work here before the sky is quite dry, that their junction may be softened, allowed to run together, and mingle on the paper. When a sky is too highly colored, it may be improved by sponging it in a crosswise direction with clean water. Let it be thoroughly dry before the work is begun and wet the sponge constantly in fresh water to free it from color.

The foreground may have objects more definitely defined. The tints in the middle distance are deeper than those in the foreground, the lines being kept level as possible to aid in the receding effect. In the front of the picture, the coloring should be lighter and more brilliant, and the brush strokes larger. If there is water in the foreground, leave it white, adding the proper tone to it afterward. Have no hard lines where trees join the ground. Water always reflects the color of the sky, or its near environments. Paint in first the reflection of objects and wash in the general tint afterward. The reflections are worked downward vertically and have only a faint suggestion of lines. Ripples may be rendered by leaving horizontal broken lines of white paper across the main tone of the water.

The immediate foreground details, such as grass, stones, and bushes, may be worked in with a small brush. The paper must be dry when they are painted in order that they remain distinct, as they are the most definite things in the picture.

Water in rapid motion should be painted with a quick, nervous touch. This will give it the appearance of flowing. Stormy evening clouds, and all quickly moving objects should be painted in this way also. You need not use this quick touch in painting the bark of trees, foliage, or flowers, when not moved by the wind.

When water approaches the horizon, as in marine pictures, there should be only a slight difference in tone between the sky and sea. The line must not be hard, and should always be level. The general tone of the water must reflect the tones of the sky, and the coloring should be very even, delicate and gradual, keeping all distant effects horizontal. If there are high lights, as surf and foam toward the foreground, the paper must be left white for these, and the shadows indicated by painting them into the hollow of the waves, their shapes being thus outlined. In misty views where the horizon does not appear, the line between the sea and sky should melt imperceptibly together, and boats or other objects be less clearly defined. Avoid minuteness of detail. If the sky wash in first painting dries out too pale, a second wash may be put on when the first is entirely dry.

Rough paper is to be preferred to smooth, for landscapes and marines. as the effect of the inequalities gives texture to the foreground and softens the distances. Do not work the surfaces over until all freshness and clearness is gone. A good picture is sometimes spoiled by efforts to improve it. There can be no extra finish to a water-color picture. The effects must be gained at first painting, when the picture is virtually completed.

### TREES

The chief difficulty in sketching a tree is that the eye is bewildered by the masses of foliage and the multiplicity of light and shade, which leaves no definite lines to guide the student in his work. They seem hopelessly blended, and it appears at first impossible to distinguish the divisions between them. The anatomy of trees is important in landscape. Every sort of tree has its own distinctive characteristics which the artist must appreciate in order to paint them so they will be recognizable. A fir tree does not

resemble an elm, nor the latter an apple tree, and each kind, though it may be expressed very simply, should be so represented as to be known for what it is at a glance.

The student will obtain valuable knowledge by making separate water-color studies of detached trees, not elaborating them, but with the object of representing truly their general appearance.

Sketch them at first in broad masses of light and shade obtaining the characteristic form without any elaboration of detail. Let there be large telling masses of light, and deep transparent shadows, which may be styled the frame work of the tree and must be secured in the first sketching, ensuring breadth, unless the detail that is to follow is so obtrusive as to interfere too greatly with the masses of light and shade. To render just enough for adequate expression, and not too much, is the first problem for the student to solve. Detail without massing is useless and massing without detail is incomplete — wanting expression. If fur or wool is treated in an incomplete manner we can guess what is it intended for, but there is no individuality for our recognition. If we follow the same treatment in foliage the trees appear as if covered with snow; in this case nature does appear without detail; but in a winter scene such appearance is appropriate.

To obtain the character, then, consists in the power of introducing sufficient detail to identify the object without infringing on the parts that should be left undisturbed, or in other words, without sacrificing breadth. To do this we must leave out detail altogether in a great part of the lights and in some parts of the shadows also. This practice is founded in fact and is not a mere arbitrary conventional rule. In a strong light the surface of a tree, unless much broken, is so surrounded and overspread by light that there is little shadow to explain detail to the eye, — it is lost in light; while in deep shadow the various parts are so confused and indistinct that there is not light enough to explain the detail; — it is lost in darkness. It is in the half tint alone that we find detail most visible and it is there that we should, in painting, strive most adequately to express it. In the extreme distance a tree presents itself as an apparently unbroken mass, but has a distinctive shape in accordance with its kind; in middle distance



there is more approach to detail of branching and leafage, while in the immediate foreground every individual leaf, stem, and branch becomes visible and it is too close to be convenient for delineation. There must be found the medium where the artist contrives, by proper distribution of light and shade to express multiplicity without excessive detail. It is that quality of breadth which, in its simplicity, no less than in its skilfulness, distinguishes the work of an artist as compared to that of the tyro. There is consolation to the latter in the reflection that the artist was once an amateur, and that he, also, can become a master if he has talent and perseverance for sustained effort.

The sketch having been made in simple light and shadow, you can carry it on from this stage with the various degrees of color. The high lights must be first laid in in a manner to leave the same forms you perceive in the tree before you. The flat tint for the shadow side is already laid and you may place the second tint on that in the same way that you have treated the light side, thus keeping them in the same relative degree of finish as you proceed. Put in the third and fourth tints in the same order and your tree is complete. It is best to practice for some time on the same tree instead of taking others less familiar. The tint for the lights may be olive green, and a more natural green composed of *Prussian blue* and *sepia* for the shadows. Begin at the top against the sky, in proper strength of tint at once, being careful not to muddle the color, and continue it down to the lower edge of the highest mass in light. Now take another brush and put in the shadow, which is often very slight at the top of the tree, which generally shows twigs of leafage appearing sharply against the sky. Use a smaller brush than you are using for the masses and put these in with the shadow color. Now take the light tint again and lay in the mass of foliage below the twigs until you reach the shadow, when you must resume the shadow brush as before. Proceed in like manner with all the masses of light and shade to the bottom of the tree, when you can put in the trunk and branches with *purple madder*, which is a thick rich color, almost black in its darkest tones and admirable in its strong washes for these uses. You will work with more confidence as you feel the color of your sketch identified with

the original. Finally there must be determined what parts are in need of strengthening with touches of deeper shadow. *Purple madder* mixed with green is best for this purpose and it must be done with a small brush.

The various stages of distinctness in detail as trees retire from the eye may be thus broadly stated. First, the entire leaf, with the light and shade of all the inequalities on its surface, including veins and fibres, which however, are never rendered. Secondly, groups of leaves rendered intelligible by lines of shadow, and thirdly, the general arrangement of these masses or lines of shadow into clumps of foliage with little visible detail, merely having a light side and shadow side to each clump. Fourthly, the clumps in larger masses growing less and less distinct until they appear as a mere flat tint and disappear in the gray of the horizon. The great object to secure in sketching is simplicity in the drawing, expressing multiplicity in the foliage, yet not losing the massing. The stems must appear, become lost, and reappear, growing smaller toward the top. The color must be bright in the lights, sombre in the shadows, and rich in the half tints, preserving the transparency.

A modern improvement in the practice of water-color painting is facility in removing color by dampening a fine sponge and absorbing it from the paper by successive applications, dipping each time in clean water. This is particularly useful in foliage, as by this process texture and looseness may be given to a monotonous mass and brilliant lights added to represent irregular projecting sprays.

#### GENERAL HINTS

When he begins to study from nature the student should always carry a note book, because the finest effects will vanish before there is time to copy them. You must, therefore, note them down and reproduce them afterwards from memory. If there is not time both to draw and paint, devote all the time to drawing, and before you have lost your impression of the color, or it fades, try to reproduce it by outline or otherwise. Practice will render you so expert in this way that you will be able to see all sorts of effects, and beautiful things, and reproduce them from memory. It is not

best to be too much of a copyist after the first stages of practice has given knowledge and confidence. Try to see nature with your own eyes, instead of another's. Individuality is an essential thing in painting. Study the works of great artists and take mental notes. It can do no harm to copy parts of great pictures to gain a knowledge of how thoroughly the master works. For example, take the distance in "Childe Harold's Pilgrimage," "Crossing the Brook," or the foreground of Turner's "Frosty Morning." The detail and atmosphere in most of these great paintings are difficult to copy in water-color and are good practice.

It is of value to study the methods of these painters. Turner, for light, atmosphere, color, and the drawing of clouds and mountains; Millais for everything. His works are good all through, poetical in feeling, while at the same time they are true and unconventional studies direct from nature.

The question often occurs, "What shall I paint?" The subjects are all around you every day. Acquire the habit of sketching from life the commonest objects; a bit of drapery, a beam of the sun across the floor, a bush, a tree, an old well with its sweep and bucket, a chair, a table, a cozy corner, a child at play, a lighted lamp, a tumble-down log cabin, etc. You will paint many studies and destroy them or paint them over, but keep perseveringly at it and you will be surprised with your own progress and rapid acquirement of facility.

Among the painters of to-day are many whose productions are eminently worthy of study. Geo. Inness, who is considered the best American painter of landscape, almost equals Millet in technique, color, and composition. Among the three Morans — all excellent artists, especially in marine painting — William Moran excels in atmospheric effects, light, and color to such a degree that he has frequently been called a second Turner. The great ones in all lines are always in process of development.

The painter will sometimes "build better than he knows." He will be surprised at the effects he will get and will not himself know just how they were done. The subjective mind plays a large part in all earnest art work, whether it be painting, music, literature, or other forms.

## FLOWER AND STILL LIFE PAINTING IN WATER-COLORS



THE instructions given in these pages will be for painting flowers by means of moderately wet washes upon dry paper, which gives a more natural and realistic effect than that of painting upon a wet surface.

The palette of twenty-six colors named in the pages on landscape painting in water-colors — to which the student is referred — is also the proper one for flowers, as there is a preponderance of bright pigments in the list. It is equally adaptable for still life. About the same outfit of materials will be required as for landscape painting; therefore, there is no necessity to repeat the enumeration of them. Not all of the colors named will be needed by the beginner. An empty color box should be procured and filled according to choice with the colors which the amateur finds most useful.

The student should commence his work by copying the best simple studies of flowers he can find. Even when the study of flowers from nature has begun it will be found very helpful to continue the copying of good facsimiles, which are issued in variety by lithographers and art journals and are very appropriate for the purpose. The difficulty of painting from nature, or the round as it is called, will be much lessened by assiduous copying of such studies until a knowledge of materials and how to use them has been attained.

It is taken for granted that the student has as a preliminary a fair understanding of floral drawing and anatomy, which is essential to any successful work.

In making a pencil sketch of a flower subject, care should be taken to render as faithfully as possible the characteristics of the separate blossoms. Draw each petal by itself, beginning in the middle or center of the flower and defining its limits, which should be clearly drawn, as it is from that point



everything radiates. The shadows are deeper there and must not be vague or uncertain, as it will weaken the entire effect. In the pansy the small, white, yellow or greenish touches at the center should never be omitted, because they are the distinctive marks of the flower. It is best to begin the sketch of a flower in the middle, as a general rule. Make the outlines very thin and delicate, with no double lines. Heaviness of outline and deep pencil marks made by pressing the point on the paper are to be avoided, as they will inevitably show through the coloring of the picture. When the outline has been sufficiently defined by color washes, the painting should be allowed to dry and all the pencil marks be taken out with a sponge rubber.

Some flowers are more difficult to paint than others. Roses are supposed to present the most obstacles to the student, but they are not so difficult as double violets, carnations, chrysanthemums or the elder flower; the latter, especially, with its beautiful lace-like, spreading blossoms being almost impossible to represent. It can only be painted on the bush, as it droops immediately after being gathered. The beginner should choose at first those comparatively easy to paint, such as the wild rose, with its single petals, pansies, the white narcissus, tulips, sweet peas, and hollyhocks. Flowers growing in multitudinous clusters should only be essayed after there has been considerable experience with more simple subjects.

Yellow and pink flowers require the most practice, because yellow and pink pigments are not so easily managed as are other colors, their make-up as to materials being peculiarly sensitive, becoming muddy at once in incapable hands.

Rose madder is the only resource for pink flowers, even carmine, the brightest red, appearing dead in pink washes, but the madder must be mixed with special care and handled with deftness. Greens are rather troublesome, but blues and purples are comparatively easy to control, as is white also, the untouched paper itself supplying this, leaving only the shadows, the yellow lights, and reflections to be rendered.

In the first attempt at working from nature it is best to select one de-

tached flower or leaf and make a simple study of color and form before assaying to produce a complete picture. Leaves are more difficult than flowers and must be fully as skilfully rendered, as they form an important part of every composition. It is assumed that the student has made a pencil sketch of a rose leaf and wishes to paint it. He will first wash all over it the lightest shade of green, which is the high light. When this is dry he selects the next darker shade of green in the real leaf and washes that shade all over the pictured leaf, except where he sees the high lights. When this is dry he selects the next darker shade of green in the real leaf and washes that shade all over the pictured leaf, except where he sees the high lights. When this also is dry, he paints in the shadows in shape and color as they are on the natural leaf. The veins of a leaf need not be shown, as the shadows will sufficiently indicate them if they are accurately imitated. Do not have too great a difference in depth of color from the first wash in the second one, as it gives hardness of effect. There should be very few dark shadows in light flowers, and those generally very small ones.

In laying in the first wash of a colored flower, or the lightest shadow of a white one, paint each petal separately, leaving a tiny space of white paper between. This preserves the anatomy of the flower, though it must be narrow and broken that it may not appear as a distinctive line. The petals will thus stand out individually and should be left permanently so in foreground flowers:

When yellow appears in the middle of a flower, as in a cosmos flower, a water lily, a wild rose, or the spike of a calla lily, it should be painted in first, because yellow in such flowers is the life element and it must be given full value. No other color should be allowed to diminish its importance in the picture. When yellow is simply a reflected light, it should be added as one of the last tones.

Have always enough color mixed so you can be liberal with it, dipping the brush in it deeply. Make the washes with the full brush in broad touches and do not go back over partly dry surfaces. Place the wash all on at once, as you cannot join wet color to dry without a too visible junction. The brush must not be so full of color that it runs off and forms drops on

the paper where it will settle in dark, hard patches. If such spots are formed touch them delicately with an edge of blotting paper to remove them.

#### ADAPTABILITY OF COLORS FOR DIFFERENT FLOWERS

There will now be suggested the colors most suitable for different flowers, as an assistance to the amateur, who cannot be assumed to be acquainted with the peculiarities of the various pigments, or how the best results are to be obtained by using the right colors in the right places.

Of the yellows, Aureolin is the brightest and most luminous, and is very brilliant and pure in tone. It is the best color for painting yellow flowers and may be used alone or in combination. Light washes of this color are also serviceable for representing warm tones of light shining through leaves, because of its luminous quality. Next to Aureolin in point of vividness are the cadmiums, but they lack its purity. A little Aureolin should be mixed with them even for painting orange-colored flowers as it will give them a life and vivacity not inherent in themselves. Pale cadmium, Orange cadmium, and Aureolin afford an immense variety of tints for all yellow flowers, but are too bright to be used in painting still life with flowers. Hooker's green No. 2 is of value as an element in the shadows for yellow flowers and for still life.

Indian yellow is one of the most valuable colors for the palette, being very deep, warm, and rich in tone, washes extremely well, and combines perfectly with other colors. It is chiefly used to supply the yellow element in mixed greens, to warm heavy shadows, and to enter into composition for background washes. Yellow ochre, a dull pigment, is useful for still life and backgrounds.

New blue and French blue are suitable for blue flowers, which require the brightest blues in the color box. Add a little red or yellow if modification is needed. The deep shadows are duller in shade. Combine a little Indigo with the blues for these. For a gray tone, add a little Burnt Sienna to the blue shadow tint.

Paint purple flowers with Permanent violet and mixed purples. The brightest of the latter may be made of French blue and Carmine.

For the darker touches, use Purple Madder. Grayish purples are produced by a mixture of Prussian blue or Indigo with Carmine.

Paint red flowers with Carmine and add Orange Cadmium when a scarlet tint is required, as in the poinsetta or trumpet flower. For the shadows, use washes of burnt Carmine and a mixture of Carmine and Hooker's green No. 2.

Rose madder is used for pink flowers, as it is the only bright pink paint. It has no great depth of color and carmine must be mixed with it for deep, strong tones. Paint the gray shadows with a mixture of Rose madder and Emerald green, which colors must be carefully mixed and handled to prevent muddiness, as it is a dangerous combination in unskilled hands.

Shade white flowers with a gray made of Indigo and Sepia in about an equal mixture, with no preponderance of either, which in one case would make them too blue, in the other, too brown. Get the happy medium.

The umbers are seldom used in painting flowers.

Vandyke brown is useful for stems, still life, and backgrounds.

Chinese white is an opaque white pigment which is not often required and should then be used only in very small quantities in immediate foreground objects. Where minute high lights cannot be represented by leaving the paper white, it serves to indicate them and is then indispensable.

It is usually best to paint in the warm shades and bright colors before adding the gray shadows, but in practically white flowers with only faint color, the procedure is reversed. Taking the apple blossom as an instance, the flowers should be shaded as if they were pure white, painting in the pink tint afterwards. Green leaves and foliage in general should be painted with mixed greens. Prussian blue and Indian yellow are good in combination for these and Indigo and Indian yellow are very similar, but less vivid. Hooker's green No. 2 and Burnt Sienna furnish various olives and brownish greens.

Obtain the effect of light shining through a white flower or green leaf by carrying over it a wash of Aureolin, after the shading is done.

Soften the edges of shadows or washes by passing a clean, moist brush



lightly along the edge of the wet color, which will cause it to blend with the adjacent tints.

The main shadows in colored flowers are not gray, but are tinged with the local colors. In the middle of a red rose the small, deep shadows will be red. What gray shadows there are will be found mostly on the dark side of the flower where there is no light, either direct or shining through. Thus it is apparent flowers must be shaded chiefly by their own color instead of grays, though the latter are in a measure essential, but must be used with discrimination. Follow the rule of shading a flower on the light side and in the middle with gradations of the local color, and for the dark side also where there are warm shadows, gray only being employed for the indefinite shadows on the dark side. Too much gray in shadows takes away all warmth and life from the flower.

The white paper is left untouched in painting white flowers, to represent the high lights. Render the shadows by gray, except those in the center, which usually have a yellow glow. Reflected lights on white flowers, or green leaves, or light shining through, are golden in tone, while in colored flowers such lights appear as a warm and intense shade of the local color.

It is necessary to keep the colors in flower washes as vivid and clear as possible, as the brightest pigments are unable to rival their purity and brilliance in their natural state. Therefore, as mixed color is never as clear and brilliant as pure color, it is best as a general principle always to use pure color whenever and wherever it can be so applied.

## BACKGROUNDS AND FOREGROUNDS

The background should always be harmonious with but subordinate to the picture. This is also true of the foreground. Both should be somewhat dull and subdued to add value to the subject. The question of colors must be decided by the particular picture for which they are required. If there are no polished tables, elaborate table covers, or like objects to appear as special surfaces, there may be used a wash of indigo and sepia for the foreground, or sepia alone. For backgrounds, Indigo,

Sepia and Indian yellow mixed together furnish a satisfactory range of dull, grayish greens. Hooker's green No. 2, Indigo, and Sepia afford a series of cool tones. Prussian blue and Burnt Sienna in combination produce pleasant atmospheric greenish blues, which are the reverse of aggressive and furnish appropriate backgrounds for many subjects. A background is usually more or less cloudy, and generally needs successive washes for the graduated tints, each being allowed to dry before the next deeper one is added. Where the wash begins, moisten the paper with clean water that the edges may blend softly, instead of being left sharp. Use the color much wetter for backgrounds and foregrounds than for flowers and leaves.

Drapery, also, as a background, must be kept subordinate in value. Blend the shadows a great deal but preserve their shape, to prevent stiffness of appearance. Do not elaborate figures in the fabric; merely suggest them. Only the most dim and shadowy effects of drapery should be used as a background for flowers, and it should never be of rich material, like plush or velvet.

The whole composition must be definitely established on the paper before the background is put in. The first background wash should be laid on when the picture is about half done and if it is desired to have it very dark it is better to employ seven or eight successive washes to get the effect, rather than to obtain it by laying on heavy color once or twice. Foreground shadows may be rendered by grayish or brownish tones and a light yellow washed over them when they are dry to give transparency and warmth. Flowers and leaves at a distance should be made of a tone that approaches the color of the background, thus aiding the impression of perspective, because effects of distance in pictures are produced by lowering the key of color and omitting detail.

### STILL LIFE IN FLOWER STUDIES

Still life is so frequently used with flowers that a few directions as to its proper relation in such pictures will not be out of place. Like foregrounds and backgrounds, objects of still life must be kept subordinate to

the main subject; and the details of brilliant high lights and decorations must be toned down in order not to divert attention, or detract from the principal *motif* of the picture. For instance, a cluster of pink roses in a blue bowl is charming, but the blue of the bowl must not be so bright for blue as the pink of the roses is for pink, otherwise the bowl rivals the flowers. The artist who has a knowledge of the fitness of things uses his brilliant colors for flowers, and his dull ones for still life, thereby enhancing his effects by contrast. A favorite subject of many artists is purple violets in a yellow vase, purple and yellow being complementary colors, but if the vase be painted with Aureolin or the Cadmiums, it will be more brilliant than any purple that can be devised, and the flowers will be thrown in the background. On the contrary, if Yellow Ochre and Brown Ochre are used for the vase, the dull quality of these paints, while suggesting and carrying out the complementary color scheme, will offer no rivalry.

In pottery, as for instance, a vase holding the flowers, the ornamentation, if any, should be merely suggested and only the most noticeable parts rendered, as a mere hint to the observer. On the contrary, where still life forms the subject of the composition, it may be brought out and elaborated as is the case with flowers; when bright colors can also be used. In representations of china and glass, with decorations of gold, the effect of gold can be obtained by yellow, brown, reddish, or greenish tones, as light and location require. The proper colors rightly used will give the effect of metal. All metallic objects are painted on the same principle.

Books, music, and printed matter require great accuracy and delicacy of touch, and are too difficult for beginners to venture upon.

If it is desired to paint a clear glass, place the real one against the background, as it is intended to be in the picture, because it will take the color that is near it. Water in the glass will change the light and shadows so that they differ materially from the empty glass. Represent stems and twigs in the glass in a shadowy manner, or they will seem to be outside. Refraction of light causes them to appear broken where they enter the water, a fact not to be forgotten in delineation.

In still life gradual effects can be secured by modeling the color while it is wet, thereby avoiding abrupt transitions of tint. Make the washes rather wet, but not enough so to run together and settle upon the surface in streaks. Put on the second wash of paint before the first is dry, and the third wash before the second is dry, so that the successive washes blend together to just the right degree.

When painting still life, high lights are sometimes obtained by carrying the color all over the object, and when dry washing off the color at required spots with a sponge.

The reflections cast by still life and flowers when placed on polished surfaces should not be made too definite, or they will rival in importance the object that cast them. They should be kept low in tone. When they appear too bright after a picture is finished and dry, a light additional wash of the foreground color carried all over the foreground will subdue and render them harmonious.

### CONCLUSION

While the work of painting a picture is in progress, the student should, at different stages, set it at a distance and contemplate it as a whole, thereby getting its general aspect. He will be apt to see tiny white patches here and there which have been left inadvertently and that have the effect of bringing forward the part where they occurred. If needed to throw back a group into greater shadow, a tone of gray may be washed over it. Put such washes on with few touches and lightly, having the surface where they are applied quite dry, to prevent washing up the color underneath.

The law of contrast; and composition, which is the general planning of the picture, must be carefully studied. A yellow flower painted with the brightest color still falls short of nature, but if one of dark purple be placed so the two are seen together, the yellow one is made to appear much brighter in tone; thus two elements are used, the contrast of color, and the contrast of light and darkness, which much enhances the value. To determine just what is required belongs to the domain of these laws and is a separate study in itself.



Much that has been included in these directions is applicable to all water-color painting, and for the purpose of saving space are not repeated elsewhere. The instructions for landscape and those for flower and still life painting should be studied equally, as there are many directions in each that are applicable to all.



## PAINTING ON CHINA

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IN procuring china for decorating, be careful to select pieces free from defect as possible. The French hard porcelain is generally thought the best.

The painting herein described will be understood to be painting over the glaze, in enamel colors, on hard porcelain, which is adapted to every style of design and can be made to receive the highest finish.

The enamel colors used in this kind of painting come in tubes, ready prepared for use, though some artists prefer to get them in the form of



SQUARE SHADERS FOR GENERAL CHINA PAINTING

powder and mix them with the oils. Do not mix together colors of different manufacture. Materials necessary for china painting are these:

Tube colors, in number according to work projected.

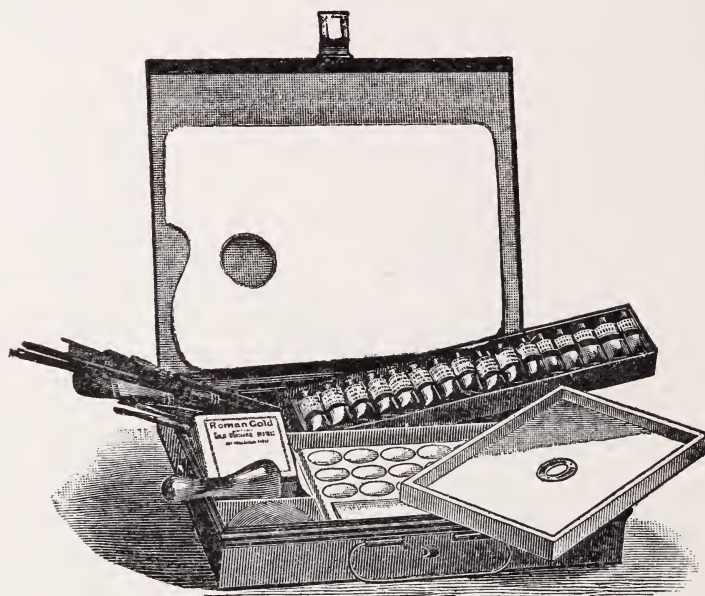
A porcelain palette.

A glass slab, ten inches square.

A few Russia sable brushes of medium size similar to those used in water-color painting.

Small and medium-sized camel's-hair brushes.

The best camel's-hair brushes for china painting are those called square shaders. No. 10 and 12, and two smaller sizes, a No. 6, 7, or 8, are sufficient for ordinary painting. They come in quills and should be provided with cedar handles.



Several large and small blenders. For large surfaces No. 9 is about the right size.

One bottle of spirits of turpentine.

One bottle of alcohol, 98 per cent.

One small bottle of oil of turpentine, one of copaiba balsam and one of oil of lavender.

A palette knife of ivory or horn.

A strip of wood, about a foot long and two inches wide, to rest the hand on while painting. It should be supported at each end by a foot

about an inch high, or a little more. A flat piece may be used for a rest when painting plates or other low pieces.

A fine needle, set in a handle, for removing particles of dust, and a little glass muller complete a full outfit, of which the cost, including a large stock of colors, need not exceed ten dollars. The beginner will need but few colors and the outlay will be, of course, proportionately less.

### PREPARATION OF THE DESIGN

Take the piece of china to be decorated and rub the surface over with spirits of turpentine, leaving it to dry for a few moments; after which, draw the design upon it lightly with a hard lead pencil. Alcohol may be used for the same purpose and is in one respect better than turpentine, in that it is not so liable to catch the dust. It is best to have the drawing of design as delicate as possible to be plainly visible, as the lead from the pencil, if profuse, is apt to sully or vitiate the colors, and cause difficulty in working. If the design be a very large and intricate one it is best to trace it upon the china by means of impression paper, but the beginner should not attempt such work, choosing at first simple designs, as single flowers or figures. A sharpened stick of soft wood is thought by many to be better than the needle before described for removing dust. A large pad of soft silk filled with cotton may be preferred as a blender, and is more economical than the boughten ones, as an old silk handkerchief may be used.

### LIST OF COLORS

The colors used for china painting are classified with regard to their containing iron, which is an important constituent of many of them.

*First Group.* Colors not containing iron — the whites, blues, and golds.

*Second Group.* Colors with little iron — yellows and greens.

*Third Group.* Colors whose base is iron — the blacks, most grays, ochres, brown yellows, browns, iron violets, red browns, flesh reds, and reds.



None of the reds or colors containing iron should be mixed with any yellows except mixing yellow, and the brushes should always be carefully washed after using a color containing iron, if to be used in a color not containing iron, or if white is to be used. The following list embraces all colors necessary for painting, from which the amateur may make a selection for his first palette, and add to them afterwards as he finds advisable.



## BLUES

*Bleu ciel ou azur* — Sky blue.

*Bleu outre mer riche* — Dark ultramarine.

*Bleu riche* — Deep blue.

## GREENS

*Vert, No. 5, pré* — Grass green.

*Vert, No. 6, brun* — Brown green.

*Vert pomme* — Apple green.



## YELLOWS

*Jaune à mêler* — Mixing yellow.

*Jaune d'ivoire* — Ivory yellow.

*Jaune jonquille* — Jonquil yellow.

*Jaune orangé* — Orange yellow.

## BROWNS

*Brun, 4 foncé ou 17* — Dark brown.

*Brun jaune* — Yellow brown.

## BLACK

*Noir d'ivoire* — Ivory black.

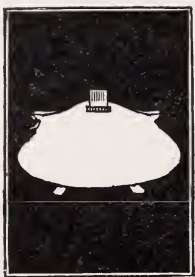
## WHITE

*Blanc fixe* — Permanent white.

## GRAYS

*Gris, No. 6, perle* — Pearl gray.

*Gris noir* — Black gray.



REDS AND RED BROWNS

*Carmine*, No. 3, *foncé* — Dark carmine.

*Rouge chair*, No. 2 — Flesh red, No. 2.

*Rouge capucine* — Capucine red.

*Brun rouge riche* — Dark red brown.

*Violet de fer* — Iron violet.

PURPLES

*Pourpre riche* — Deep purple.

*Violet d'or foncé* — Dark golden violet.

To these may be added at convenience *deep blue green*, *carmines* Nos. 1 and 2, *silver yellow*, and any others in the whole range of colors that may be found most suited to the purpose of the student. Many other colors will be named in the following pages as adaptable for use for particular flowers, figures, and other objects, and the amateur can adopt those he prefers. Those in the list, or colors chosen from it, may serve for an experimental palette for the beginner who must feel his way slowly to a complete knowledge of pigments.

ON MIXING COLORS

A greater variety of colors are needed in china painting than in oil or water-colors, because of the difficulty of indiscriminate mixing. The palette, however, should be as limited as possible to answer the purpose, to prevent becoming involved in intricacies. It is best for the amateur to use few colors and understand well how to produce effects. It is well to have a clean brush for each separate color used. *Mixing yellow* and *jonquil yellow* do not contain iron and are suitable therefore for mixing with the blues to obtain fresh greens. The yellows containing iron should be mixed with the iron colors, on the contrary. The color called *silver yellow* mixes readily with the gold colors, with *iron violet*, and sometimes with the reds. The grays are made by mixing colors of the different groups, blue, red, and black, in proportions according to the tint required. A good gray is made by mingling one-third *ivory black* with two-thirds *ciel blue*. A little blue should be used with every black, as black alone will not always fire well.

What are called the hard colors require more heat than the others for their fusion, the dark colors being harder than the light ones. The most fusible colors are *ivory yellow*, *reddish gray*, *pearl gray*, *soft carmine*, and *sky blue*. Do not lay these on too thickly, as it may cause them to scale in firing. If a portion does not receive enough glaze in firing, apply a wash of fusible color and fire again. Permanent white and the opaque compounds are not often used in painting on hard porcelain.

It is a good idea to arrange upon a plaque of china the colors you wish to use and to mark them carefully. Then fire it, and you can see the changes firing will produce and have a valuable reference and guide.

The tube colors are already mixed with thick oil and the only medium required in manipulating them is turpentine; or, if for colors to be used on a large surface, lavender oil is better, as it keeps the color moist a little longer, giving more time for painting. Clove oil is sometimes used if the worker is slow and hesitating. When using the powder colors, thick oil must be added, in like quantity in bulk to the amount of powder. Too much thick oil in any color will cause it to bubble up and blister in firing. Mix with the palette knife thoroughly, then thin with either lavender or spirits of turpentine, or sometimes both.

Alcohol is necessary for cleaning brushes, palette, knife, etc. Turpentine does not cleanse these articles so well, nor so easily, and inclines to make the hairs of the brushes brittle. If a brush that has been used in blue is not washed until it has been divested of every trace of color and is afterward dipped in carmine, a tinge of blue will inevitably be imparted that will destroy the purity of the carmine. It is well to wash the brushes occasionally in soap and warm water. Alcohol evaporates quickly and should be kept tightly corked. It is a good plan to have a wide-mouthed bottle in which to clean brushes. Have it of ample size; the alcohol remains clear and clean, as the colors will settle at the bottom.

#### FLOWER PAINTING ON CHINA

A plate is the best object for a beginner, as it presents an almost flat surface. A plaque will do equally as well. The tube colors being used,

it will simply be necessary to dilute them with turpentine, and a drop or so of oil of turpentine can be added to the spirits of turpentine if the colors are difficult in laying. Care must be used to avoid any excess of oil.

The colors first laid will sometimes come up through a second painting. To prevent this, dry it a little in a moderately warm oven before proceeding. If the colors change as the result of this, or lose their gloss, no alarm need be felt, as the firing will restore their first brilliancy. Remember to carefully cleanse the brush after using a color containing iron, before using it in other colors or white. The same rules we have given in another part of this work, for painting in water-colors, may, to a great extent, be applied to painting on china, as the two are very nearly alike as to the manner of working, laying on the paint, etc. Avoid confusion and uncertainty by nicety in placing every touch where it is to be left; not spoiling it by overworking. Use the blender only in the first painting, and never pass the brush twice over the same place in immediate succession. Give each painting a short time to dry. If it does not dry quickly enough, put it in a warm oven as before directed.

If any of the whites or carmines require to be rubbed down, use the palette knife of horn or ivory, as also with the blues, and colors with no iron.

The *carmines*, being very important pigments in the practice of china painting, require particular directions in handling.

They are four in number. The lightest in color is *carmine A*; the others are designated by number, No. 1, No. 2, and No. 3, respectively. No. 1 is the most used and is very satisfactory for pink flowers, draperies, etc. They are the gold pinks and a discrimination must be made between them and *carnation* or *deep red brown*, an iron color, which has a tinge of red with an admixture of yellow. The distinctive difference is that *carmine* is pink and the other pale red. What is said of *carmine* is equally true of *rose*, *English pink* and other gold pinks. The gold colors are the most difficult to manage and require special care in firing. If carmine is underfired it comes from the kiln yellowish in tone but may be restored by subsequent firing. If, on the contrary it is fired too hard it will come out with a blue or purple tone, and is worse than before, as this defect



cannot be remedied. *Carmine* once overfired is beyond restoration. In addition to an understanding of a proper degree of heat to develop the carmines, it must be remembered to apply them in the very thinnest washes possible; the thinner the color the more beautiful and pure will be the tint. Before carmine is fired, it has no resemblance to the lovely pink it is afterwards, and a beginner is very apt to apply it too heavily. Use perfectly clean brushes, knife, and turpentine, for the carmines. It is well to have separate brushes for them, for if there is the smallest tinge of other color in the brush it will impart itself to the carmine.

Carmine is called the "test color," as skill in the firing and management of it is a good test of the ability of the artist and is considered a standard of experience.

Do not overcharge the brush with turpentine when you are to fill it with color. Remove the surplus by drawing the brush over edge of the cup containing it, before taking up the tint from the palette. Try the color first on the edge of the plate. After using, wash the brushes in alcohol. Spread the hairs of the brushes apart after cleaning and rub lightly till they are dry, to prevent their sticking together.

Keep the tops of the tube colors screwed tightly on, and the colors away from heat to avoid drying up, which, however, they will not do within a year if care is taken. If they do become dry, open the other end of the tubes and rub them down to powder with the palette knife.

Flux, which is the medium by which the color is united in the kiln to the glaze of the china is an important ingredient and exists in all colors to a greater or less degree. Grounding colors, being prepared especially for tinting are abundantly fluxed when manufactured. Painting colors, if applied for tinting, or any other purpose, in thin washes, must have additional flux incorporated with them in proportion to the quantity used or, rather, to the extent of surface over which the color is to be distributed. Flux imparts the beautiful and brilliant lustre which is shown in perfect work, without which a painting will appear dull and dead.

There are two generally accepted methods for the practice of amateurs by which floral designs can be painted in the least difficult manner.

One is to apply the local color in almost flat tints for the first firing. If the flower be pink, pink alone is used in varying degrees of strength and without gray or shadow tones and with little detail. The color must be washed in broadly but very delicately. It is then fired and afterwards modeled and completed with gray tones and the further touches of color it may require. This is an easy way as it preserves the drawing and it is in good condition to finish after firing.

Another way is the exact contrary. The modeling is done first, entirely with gray tones, and no local color is applied until after the firing. After the firing, color is washed on in clear tones, the deepest accents are added and then finished. Either plan may be adopted, but the first is perhaps the best and is most generally in use.

Flowers cannot be represented with one color alone except in monochromes; the shape, shadows, and values, or rotundity, must be accomplished with grays, and can be done in no other way. In oil or water-colors the shadows of a pink rose may be painted in deeper and thicker shades of pink, but this cannot be applied to china painting, as, if the color were applied thickly it would blister in the firing or require such strong heat to develop, as to ruin every other color. Grays are more important in china painting than in other modes. White roses disclose this fact more clearly than pink ones. Each separate rose, though distinctly white in itself, can only be represented by grays. These are not simply varying degrees of black and white on a white surface; for white roses no blacks should be used, only grays made by combinations of the brighter colors. They may be qualified by blue, green, pink, yellow, or violet. The lights only should be pure color. These are general suggestions and may be remembered in painting not only flowers, but draperies, fruit, or anything in which form and rotundity are to be expressed.

#### COLORS BEST ADAPTED FOR DIFFERENT FLOWERS

Pink flowers may be painted with *carmine* Nos. 1, 2, and 3. For general use *carmine* No. 1 is very good. In using these colors lay them on as thinly as possible, the thinner the better. Pale color can always be deepened after

firing, if necessary. *Crimson lake*, *Japan rose*, and *superior English pink* and *rose* are beautiful colors. Any of these will serve for painting roses, peonies, carnations, pinks, apple blossoms, morning glories, sweet peas, or any pink blossoms. A little *ruby purple* may be added for the very dark pink as in the heart of a rose, and is better than loading with carmine, which would blister in the firing if laid on heavily. Any color will blister if applied too thickly. The importance of laying on the color thinly cannot be too much emphasized, in such case even an excess of oil will do no damage, as there will not be sufficient color to form a skim on top, which prevents the oil drying underneath and causes it to boil in the kiln. In manipulating the brush, make the strokes in accordance with the trend of each petal and leaf and paint from the center outward, not leaving the brush marks in evidence. Let every stroke mean something. Take out the color with a clean brush if there be found any place where it has encroached, that is essential to be light in shade.

Blue flowers, such as lobelia, myrtle, bluebells, or forget-me-nots may be painted with *deep blue green*. This is one of the prettiest and most useful of colors and though it is listed among the greens, is not green at all, but the most lovely and perfect pure blue among the mineral colors. It is not dark even when strong and is generally adaptable for blue flowers, draperies, skies, or in any place where a pretty blue is needed. It is good in combinations with green, red, pink, gray, or *violet of iron* for shadows and distances, and with *violet of gold* makes all varieties of color required for violets, lilacs, and orchids. It does not mix well with yellow. The corn-flower must be painted with a much darker blue; there is a color made with special reference to this, called *corn-flower blue*. *Deep blue* will answer very well in its place.

*Silver yellow* furnishes the yellow centre of the forget-me-not, but the blue must not come in contact with it. Add a little *violet of iron* to *deep blue green* for those in shadow and distance, or fading into the background. Blue is a cold color and requires warm surroundings, therefore, considerable *mixing yellow* may be added to the greens for the leaves. Shade the greens with *olive green* or *brown green No. 6*. These are both warm greens.

Yellow flowers, like sweet brier, roses, golden-rod, pansies, sunflowers, chrysanthemums, daisies, or buttercups may be painted with *silver yellow* for the local color. This color is very rich and brilliant and produces a splendid range of tints in thinner washes. *Orange yellow* or *yellow brown* may be added to strengthen deep tones to good effect. The latter may also be used for shadows, but very delicately. Sometimes a touch of dark red brown in places on the outer petals is very effective.

Brilliant red flowers, as the poinsetta, salvia, poppy, and some berries, such as the holly, may be painted with *capucine red* for the brightest tints, if a very vivid coloring is desired; *deep red brown* is generally red enough and can be modified for dark tints by *violet of iron*. There is no tint in mineral colors that matches the scarlet and vermilion of oil and water-color, therefore, the effects of contrast in very vivid green leaves will heighten the brightness of such reds as we have. Distant red flowers may be represented by *violet of iron*, with a trifle of *deep red brown* added for intermediate tones.

Purple flowers, as violets, pansies, lilacs, the fleur-de-lis, clematis, passion flower, morning glories, clover, and wistaria, are to be painted with *light violet of gold* or *dark violet of gold*. Qualify the first with *carmine No. 1* and the last with *deep blue green* and every shade of lilac, violet, and purple may be obtained. There is a beautiful new color, called *pansy*, in a deep rich purple, which is darker and bluer than the *deep violet of gold*. Repaint and refire for deep tones of these colors. They require considerable fat oil and will surely blister if laid on heavily. If the pansy is a combination of purple and yellow centres with purple markings, erase the purple before *violet of gold* is applied or the mixing will ruin the color. Use a steel eraser or a short brush slightly moistened with turpentine. It must not be too wet as turpentine will spread and make disfiguring blots. Clove oil is not so bad in this particular, and the sharp point of a small stick or brush handle, moistened between the lips, will answer for removing color if it has not dried too much.

Crimson flowers are difficult for the amateur artists. *Ruby purple* is the only tint that is anywhere near the crimson color that resembles them, and does not always serve the purpose, as for some it is too bright and again



not bright enough. The best effects may be obtained by using *ruby purple* first, then firing very hard, afterwards adding a wash of *deep red brown* and firing lighter. The result will be better than when the two colors are mixed before applying.

*Ivory yellow* and *mixing yellow*, in equal mixture, give beautiful soft salmon and shrimp pink tints when combined with *carnation No. 1*. These shades will do for woodbine or honeysuckle and also for some shades in roses. *Deep red brown* and *silver yellow* will do the same.

When a red or yellow is needed in full strength, place it directly on the china without mixing.

Flowers like tulips, which are alternate yellow and red, should have the tints softly blended where one color merges into the other, by a clean brush moistened with oil. Acorns, mushrooms, chestnuts, wheat, autumn leaves, and pine burrs make pretty designs in brown, being quiet and unobtrusive decorations.

White flowers are considered the most difficult in china painting. Those most frequently painted are roses, daisies, snowballs, lilies, hawthorn, clover, magnolias, carnation pinks, morning glories, and cherry blossoms. The first problem is the rendering of white on white. The only way is to draw your design and then paint around it. For example, suppose the design is a cluster of white roses in close juxtaposition, with several buds trailing off from them in graceful fashion. Paint the roses with a slight flush of color around them, or surrounded by a mass of leaves. These will bring out the design, and the white of the china will serve as the local color. The modeling or shading must be carefully done with pale washes of delicately gray tones. Increase these in tone towards the centres of the flowers and add tinges of green, yellow, or red, very lightly, in the hearts of the roses.

Study nature in deciding which colors to employ and where to locate the warm and cool shades of gray.

White daisies should be painted very delicately with warm grays. The high lights may be laid on afterwards in white enamel.

Snowballs require considerable green in modeling which should be

qualified with warm grays or *yellow ochre* for the half tones, and reflected lights. In hawthorn use touches of *carmine* or sometimes even *ruby*.

You should copy artistic studies in the beginning, which renders it a simple matter to choose the appropriate colors. If a pink is tinged with yellow, give the pink a wash of yellow; which one, your judgment must decide. If a distinct yellow, *ivory* or *silver yellow* will be correct. If lower in tone, with a tendency to fawn or brown, use *best orange*, *yellow ochre*, or *chestnut brown*. When green is visible on a white flower it is almost always a very yellow green; in this case add *mixing yellow* to either *apple green*, *stone emerald green*, or *moss green J*, till you have the proper tone.

There is a style of painting on china called "Dresden" which consists of tiny flowers scattered at irregular intervals over the surface, without any apparent method, in which much of the modeling in gray is omitted. For this a variety of flowers may be chosen and they may be distributed as single blossoms or in groups of two, three, four, or five, showing the flower in every possible position and light. These are finished with little elaboration of shading. Bright colors are used, the forms being delineated with light and dark shades of some colors which are strongly contrasted. It produces dainty and delicate effects, but has very little of real art about it, being somewhat commonplace. Yet it is often very beautiful and is attractive and pleasing to many. It does not require much labor, either physical or mental, and lovely results can be obtained with little trouble, which considerations are not apt to be forgotten, or disregarded as a mode of easy practice.

*The general treatment* adopted by flower painters on china is to paint without detail for first firing. Apply for this very thin washes of color in pale shades. Add more color for the second firing. When the more prominent flowers are washed in, or a part of the design in the pure color, add gray for the surrounding flowers and leaves that serve as the background and place in the vague and distant effects. Render these very delicately with little color on the brush. A very small amount of color is distinctly visible on white china and too little can scarcely be used for the first firing. All the strength the subject requires may be added sub-

sequently before the second firing. When the proper values and modeling are secured the rest will fall easily into line. But too great stress cannot be placed on these two most important principles in all of this kind of painting.

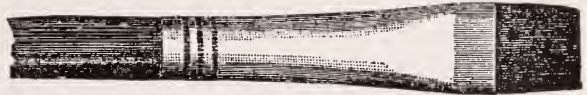
When there is a background let it be harmonious — even if a contrasting color — to the general color scheme. *Silver yellow* is a good background for violets. *Russian green* looks well with pink flowers, *carnation* with white flowers, or *chestnut brown* with blue flowers. *Ivory yellow* and *chestnut brown* in thin washes are most useful colors for this purpose, as they harmonize with any color of flowers.

The hop-vine is a favorite green decoration, as it is graceful and easy to paint. Maidenhair ferns and other varieties of fern and grasses are introduced with good effect in many subjects. The greens thus used must harmonize and no more than two or three should be used. Various tints of green can be produced with one green and *mixing yellow* and *best orange* or a brown. *Brown green No. 6* is always harmonious with greens. Mignonette may be painted with two or three greens, yellow greens, and the red touches put in with *deep red brown*. Leaves are considered rather difficult, because they are so similar, without variety of color to afford contrast of shading. Rose leaves are good subjects for practice. Some are quite yellow green, others olive with considerable brown, and some are of a bluish or pinkish gray. *Ruby* frequently occurs in the tender shoots and extreme points of the older leaves. Paint them very thinly for the first firing; even those intended to be made dark, as more color can be added for the second firing. In painting a leaf begin by painting one-half from the central rib or vein and let the brush strokes follow the veins. Use *apple green* and *mixing yellow* in whatever proportion is desired in the beginning but do not paint the whole leaf in this one tint. Add darker greens and olive and brown tints as the different hues appear in the leaf. It is difficult to give definite directions for painting leaves. While some hints may be offered, no hard and fast rules can be laid down. Facility will come with practice and study, as in everything else. The relative values of light and shade are of more importance than detail; detail must

be regarded, but comparative correctness is a primary consideration, and absolute accuracy will follow in course of time.

*Graduated tints* are obtained by applying washes of the same color in different depths or degrees of tint. Another method whereby stronger effects are produced is where two or more colors are introduced in their several successive shades and are blended to form a graduated effect. *Moss green J* at top of a cup and *light violet of gold* or *carmine* at the bottom is a blending sometimes seen. *Deep blue green* and *carmine* is also a good combination. *Mixing yellow*, *stone emerald green*, *olive green*, *brown green*, *shading green*, and *green No. 7* will form a chromatic scale of greens. *Silver yellow*, *yellow brown*, and browns *Nos. 3* and *4* furnish a splendid range of graduated tints, from a pale yellow to a deep dark brown. There is wide margin for selection. Tinting is extremely easy, demanding no special skill and very pretty results are obtained by it.

*Ground laying* is the process of dusting dry color on a prepared surface. The special medium or vehicle for this is called "grounding oil," and is a thick, heavy, varnish-like substance; although of a dark brown color, so little is apparent on the china after the oil has been diluted with turpentine that it is generally necessary to add a little



RUSSIA SABLE GROUNDING BRUSH

lampblack in order to see where it has been distributed. The lamp black will burn off in the firing. Pour a little of the grounding oil in a saucer, and add enough turpentine to make it work freely and prevent stickiness. If the tint is to be very pale, add more turpentine. When in readiness, use a flat brush and put the prepared grounding oil on the china, placing it smoothly. Use a pad to blend with and the advantage of coloring the oil with lamp-black will be perceived at once. If the oil is applied unevenly, and thicker in some places than others, the color will be uneven when the china is fired. After laying on a perfectly even surface of oil, set the article aside for a time, until it becomes in a "tacky" condition, but do not touch it in this state or defects will surely be evident;



wait until it becomes dry enough to be just right to take the color, which sometimes requires a few minutes, and sometimes several hours, according to state of materials, and atmospheric conditions. When it is right it will not make the color moist or even damp.

Place your color on a tile or plate and with a ball or wad of fine, raw cotton dip into it and apply it very lightly, letting it fall on the prepared surface. If the ground is correct, enough will adhere to produce the desired result and no more, and the superfluous powder may be brushed or blown off. Take care, in applying the color, that no part of the cotton touches the china without the intervening color, as contact would mar the effect. Neither must the color be rubbed on. Apply it very lightly and keep the color well in front of the cotton by a slight rotary manipulation. When it is entirely covered, dust the superfluous color off gently with a flat camel's-hair brush. Tinting in this way is better than by the moist tinting, as the full depth of color can be gained in one firing. Color so applied can be graduated in tint by adding more turpentine where less strength is required. *Gold bud* is a strong brilliant color for grounding. *Celadon* and *maize* are favorites, while *Isabella* and *Chinese yellow* are useful, as they are not sufficiently pronounced to conflict with other colors.

#### FIGURE PAINTING ON CHINA

Figure painting is the highest and most difficult branch of the art and must bring to its aid aptness and much training and experience. Many can paint flowers very well who fail in this line signally. The drawing must be correct, the outlines faultless, and it is better to let it alone unless the pupil has special adaptability and taste for it. A knowledge of anatomy is required and the severe course of study needed is undertaken by very few; therefore the figures so often seen on china which are the work of unskilled hands, are no delight to the beholder, only creating sympathy for the perpetrators of them. If it is desired to essay figure painting it is advisable to obtain a good colored study from which to work. A profile is easier to paint than a full face, and the study should be three or four inches in length, as smaller ones will be more difficult of manipu-

lation. Avoid trying to paint portraits. A fancy or ideal head is the best subject for an amateur.

The best colors for flesh are *carnation No. 1*, *ivory yellow*, *mixing yellow*, *deep blue green*, *violet of iron*, *brown M*, *sky blue*, *pearl gray*, *yellow brown*, *warm gray*, *gray No. 2*, *neutral gray*, and *flux*. They can be used to produce by combinations a local flesh color, a warm shadow tint, and a cool shadow tint.

In making the rosy tints for a Cupid take a small quantity of *carnation* and add one-third *flux* and a drop or two of fat oil. Dip the palette knife in the lavender oil and with what adheres to it rub and thoroughly mix together these two ingredients. This will do for the lips, cheeks, and the extremities, fingers, toes, and elbows, which generally are of rosy hue. To the remaining color add an equal quantity of *ivory yellow* and *mixing yellow*; not too much of the latter. Mix the three tints with lavender oil, which will make the local flesh color. The warm shadow tint is made by mixing in the same manner equal portions of *deep blue green*, *violet of iron*, and *brown M*. Then with equal parts of *sky blue* and *pearl gray* make the cool shadow tint. With these colors and careful mixing any flesh tints may be represented; a Cupid's is more pink than others and a larger proportion of *carnation* should be used.

An easier method of painting a small head or Cupid is to model first in gray tones and apply the local color after firing, just reversing the previous method. For the grays use *Brunswick black* and qualify it with a little *carnation* and *yellow brown*. Where the flesh tints are to appear keep the china free from the grays. Leave it white until fired and then wash in the flesh tints. While the flesh tint is still sufficiently open, take a small blender brush and with a very little pure *carnation* (fluxed) blend in the additional color on the cheeks, the chin, and the lobe of the ear, if it is visible. These touches must be put in very delicately, and only in the places where they belong. They must fade imperceptibly into the local flesh color. Then with another and similar brush rubbed into the warm shadow tint, apply where needed in broad masses, then in between these two tones put in the intermediary, the cool shadow tone which is to unite

them into a gradually deepening shadow. The cool shadow tints are used on the temples, and at the roots of the hair on the forehead, and the modeling of the nose and chin. For the iris of the eyes, when blue, use *deep blue green*, if gray, use *gray No. 2* and *neutral gray*; if black, use *black brown*. Never use black in any case. Shade the eye with regard to the light in which it is seen. For the sight of the eye take a small, pointed stick, moisten it between the lips and with one delicate touch remove the color where the sight is indicated. This gives life to the face and a bright intelligent look, and should not be omitted.

Under the eyelids use *gray No. 2* and shade the white of the eye with the cool shadow tint. Place a mere touch of *carnation* in the corner nearest the nose. There is generally a faint violet tinge under the eyes, which may be made by mixing a little *warm gray* with the cool shadow tint.

Paint lips with *carnation* shaded with *gray No. 2*. Paint in the local color of hair in simple masses of light and shade, with little, if any, detail. There should be no blending and the brush marks must follow the direction taken by the hair from the top of the head. The color should be somewhat dry. Press the brush down in it until the hairs spread, and with it in this condition, lay on the strokes, which will give a natural appearance, and has been found a good and practical method, as it better represents the light and fluffy nature of the subject.

*Ochrè* and *sepia* are good colors for light hair. Shade with *black*, *neutral gray*, or *black brown*. These, with *brown No. 4*, *chestnut brown*, and *pearl gray* are adapted for every variety of color in hair. For very black hair a touch of *sky blue* or *air blue* may be added to *neutral gray*. The eyebrows are painted with the same colors; these and the eyelashes should be painted after the first firing.

Where there is thin, transparent drapery over a nude figure, the flesh must be left pale in tint except where exposed. The folds of the draperies are made by wiping off the color where necessary with a clean brush.

Take out sharp, high lights when work is dry; the china may then be shaded lightly with pale, soft gray tones and the effect is complete.

Keep backgrounds subordinate; they may be left till after first firing

or painted first, before the head or figure. In either case have no harsh lines between the subject and background; soften one into the other. Where hair floats out over a background it must be kept soft and partake of the background tones. In representing jewelry, never use gold, which would be in bad taste. Instead, simulate it by a bright and light shade of yellow shaded with *chestnut brown* or *yellow brown* and a little *neutral gray* with *brown No. 3*.

Figure painting is not properly a branch of study for the amateur, belonging rather to more advanced stages of practice, and should be taken up, if at all, after the student has acquired facility in less complicated lines. However, very simple figures may be quite successfully painted by the amateur worker, from good colored studies, if he is apt in copying color and form.

#### APPLYING GOLD ON CHINA

When gold is placed directly on china it is called "flat gold." When on relief paste it is styled "raised gold." Two forms of gold are recognized by the trade, one being the real, pure metal, technically known as "burnish gold," and the other is known as "liquid bright gold"; the latter, strictly speaking, being more in the nature of a lustre.

Burnish gold is also known variously as "Roman," "matt," "dead," etc., these names being given to distinguish different preparations of burnish gold. Other names are "red gold," "yellow gold," and "green gold." These also only express modifications, or shades obtained by alloys.

Burnish gold comes from dealers in either the dry powder form, or already mixed with oil and turpentine ready to use. When in the dry state, it must be mixed with about an even bulk of thick oil and then diluted with spirits of turpentine until of the proper consistency.

Liquid bright gold comes in small vials and is the cheapest kind. It must be poured into a small well or on a water-color slant, and there is no particular care needed in applying it. It fires of a uniform brightness, even when laid on irregularly. There is a special "essence" or medium



that comes to dilute liquid bright gold, and nothing else must be used for the purpose.

It develops at low temperature and requires no burnishing, coming from the kiln with a bright and brilliant lustre. The cheapness, swiftness and ease with which it may be applied, are the best and almost the only good features about it. In effect, liquid gold is garish and proclaims itself as a base imitation, ugly, and inartistic. It has one useful function, as a foundation for burnish gold, as a matter of economy.

Failures in applying gold are invariably the result of applying it too thick or too thin. If put on too thin it will all rub off after the firing. There must be enough gold to completely cover the surface of the ware, or it will not be gilded. Gold requires the same degree of heat to develop as the gold colors, therefore the amateur can judge by the state of the latter whether the gold has been underfired or overfired. If too thickly applied it will blister and peel off, which is worse than the other extreme, as, in the first case, another application and another firing will restore it, and in the last alternative there is no remedy. To determine the right quantity to use must be a matter of experience, practice, and feeling. After using gold for a while one becomes accustomed to its requirements and is able to do successful gold work in proportion as confidence is acquired in its management.

The gold palette should be of china or glass, and never used for anything else.

If the gold is thick it may be rendered soft and in good condition by warming it slightly. Then mix to the proper consistency with turpentine and stir it up thoroughly with the palette knife, turning it over many times. As the turpentine evaporates, which it does quickly, add more, as the gold must be kept in the right condition to flow easily from the brush. If, by the evaporation of turpentine, leaving each time a residue of thick oil, the gold becomes "too fat" for use, more dry powdered gold may be added which will usually rectify the condition. A little alcohol will, to a certain extent, force the superfluous oil out of it by pushing it away in advance as it spreads out in all directions from the gold, and it may then be wiped off

the palette. Gold being expensive, every precaution must be taken to guard against wasting it. More or less will float off whenever the brush or palette knife is dipped in turpentine, and being heavy, will sink to the bottom of the vessel or cup containing it. If a wide-mouthed bottle containing the turpentine is kept exclusively for this use, the liquid can be poured off occasionally without disturbing the accumulation, and the gold removed with the palette knife, and transferred to the palette. The saving effected in this way, in course of time, amounts to an important sum.

Gold must be kept entirely separate from colors and the same implements never used for both. There must be separate brushes, separate knife, and separate mediums — oil, turpentine, and alcohol. Brushes used for gold alone and constantly in use need not be washed out. They remain sufficiently pliable or can be made soft by dipping in turpentine. When a steel palette knife becomes clogged with gold, dip it in turpentine and set fire to it and it will be immediately freed of all gold.

Gold has no appearance of what it is when mixed ready for use; but a wonderful transformation takes place with the firing and burnishing.

Gold should be applied twice and fired twice. Liquid bright gold, as a matter of economy, may be used for the first firing, as a foundation for the real gold. Where articles are to be much used it should not be applied, as it does not wear so well as the other. It will answer for purely ornamental articles that are seldom handled.

If the china is only to be fired once, lay the gold on twice; allowing time to dry after the first and before the second application. Glazed colors must be fired first before gold is put over them, but matt colors may have the gold laid on before firing, if the colors are entirely dry. To do this requires skill, the slightest imperfection ruining the work. The amateur had better have the color fired first. Avoid, if possible, placing gold over yellow, or silver over pink. Silver is lovely with pale blue, but it must not come in contact with the gold pinks; platinum can be used here instead. The use of silver is not advisable, because it does not resist oxidation from the atmosphere and gases. The uses of silver, bronze

powders, the lustres, and platinum will not be enlarged on, as they are seldom used in amateur painting.

When gold comes from the kiln it has a dull, dead appearance, very like yellow ochre and is entirely without lustre. It is polished by three methods according to degree of brilliance required. It may be rubbed with a glass brush, scoured with burnishing sand, or burnished with an agate.

A glass brush consists of a bundle of spun-glass threads fastened



GLASS BRUSH FOR BURNISHING GOLD

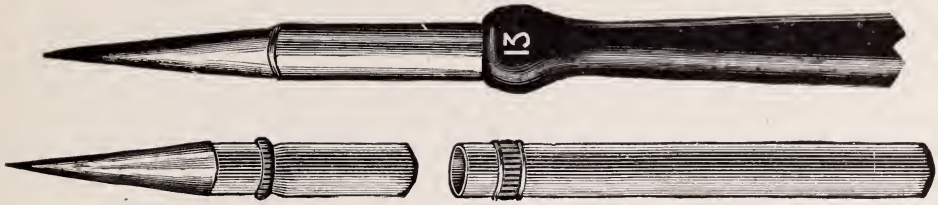
securely together to within a half inch of both ends. As it wears away the string is unwound a little and tightly secured again before using. By this means the entire brush is utilized. Care must be taken that the fine glass threads do not stick in the hands; gloves should be worn to prevent this. Hold the article over paper while burnishing to catch these particles of fibre. They will work irreparable damage if they fall on unfired color. Because of these liabilities, polishing with sand is preferable.

Burnish sand is a fine, white sand of uniform size and produces a good polish without scratching the gold. Take a piece of chamois-skin, or a soft woolen cloth, which must be absolutely clean; lightly moisten it with water, and dip it into the sand, then transfer it to the surface of the gold and rub gently and evenly until a beautiful lustre is obtained. If there are any crevices where the sand cannot reach, the glass brush must be used, as it is flexible. There will be produced a lovely, satin-like finish, that will be very soft and brilliant, but it can be brought to a still greater degree of brilliancy and splendor by the use of burnishers.

#### AGATE BURNISHERS

These come in various shapes, adapted to go into all kinds of crevices and crooks of different styles of china. They are made of agate, blood-

stone or jasper, these stones being much alike, and are fitted with wooden handles. They must be kept perfectly smooth or the irregularities will



AGATE BURNISHERS

scratch the gold. Burnishing putty and a piece of sole leather will keep them in good condition. In using the burnishers, rub the gold always one way and rub hard. It is a laborious task to go over a large surface. After it is done, polish the gold with whiting, which produces a fine satiny finish. By many, the more subdued effect given by the use of the glass brush, or sand, is preferred to the bright and brilliant glitter of the burnishing. In the soft and lustrous elegance of the first methods there is refinement and artistic effect not so well exemplified in the last.

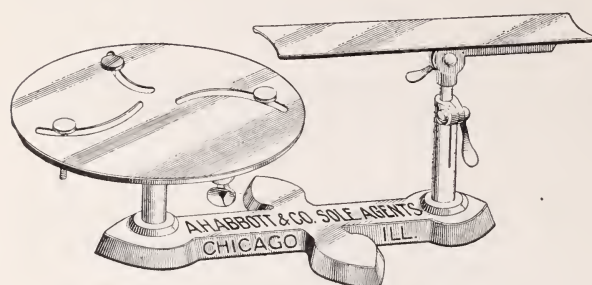
Gold must be used with discretion; a profuse display of it is vulgar, while a little is capable of greatly enhancing the decoration of china. It should be used mainly as an accessory, rather than in conspicuous ornamentation, except where it is the principal feature. It is quality rather than quantity that gives it value.

Gold grapes and leaves introduced on or in a punch bowl, enhance its attractiveness. Apply the gold twice, fire twice, and polish twice with sand. Then fire a third time after painting with the gold, the veins, the edges, and the high lights. This is not difficult. The gold may be applied with a pen for fine tracing, line work, or loose edges. The pen should be finely pointed, and kept perfectly clean and free from rust. Do not use the same pen for burnish gold and liquid gold. The pen must be supplied from a brush.

If a straight band or line is desired on a plate or other article, in a circle, a wheel must be employed, as it is the only way to obtain a uniform



width. The illustration shows a new self-centering banding wheel with



SELF-CENTERING BANDING WHEEL

adjustable arm-rest that is highly recommended as a convenience for china decorators.

Monograms in gold in the centre of table ware is a favorite form of decoration. The old English letter is well adapted as a pattern

for these. They should have two applications and two firings as in all other designs in gold.

## FIRING

Firing is the final and important process which is to render the decoration permanent. Being the culmination of all the artist's work, which makes or mars it for all time, it must be well done, or the previous labor will have been useless, the result disappointing.

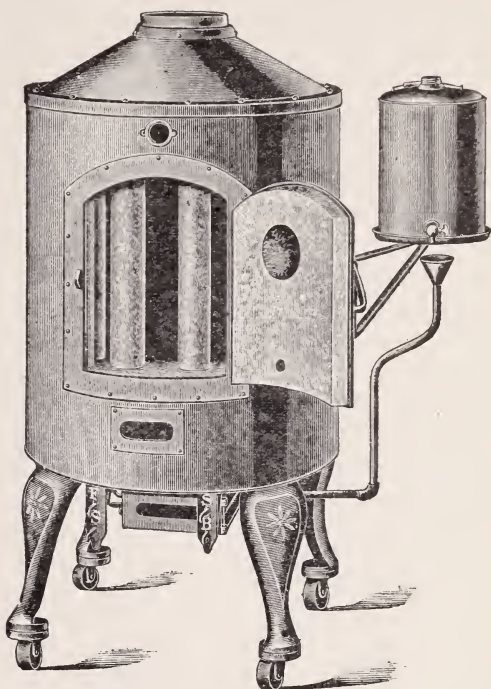
If you can own a kiln and do your own firing, the knowledge and experience acquired thereby will be of great advantage. It is interesting and constantly reveals new theories and evolves new ideas. You will become familiar with the action of fire upon the various colors, metals, and glazes, and have a much more thorough comprehension of the art of china painting than could be otherwise obtained. The trouble is more than counterbalanced by the satisfaction and convenience derived.

*Portable kilns*, made expressly for the studio, are of several sizes. The selection is a matter of individual choice or necessity, governed by the facility for obtaining fuel and the place where it is to be set. Illuminating gas is most generally used with the studio kiln. Where this cannot be had charcoal is next to be preferred, which gives very satisfactory results. Charcoal firing should be done out of doors in some sheltered spot impervious to draughts, and where the cooling off will be gradual when the fire is drawn. Kerosene oil is used as a fuel, and as it has the

merit of being procurable everywhere we give an illustration of a kerosene kiln called the "Revelation" which is recommended by reliable dealers. Instructions accompany each kiln giving in detail full directions for setting up, size of pipe required, and firing. No particulars can cover all contingencies, which can only be met by the facility that comes through experience. It is wise to light the kiln ten or fifteen minutes before stacking it with the china, in order to dry it. It is dry when it is warm, when you can turn off the fire and proceed to put in the china.

A kiln kept out of doors is likely to be damp. There will be some "sweating," but it can be prevented from doing damage by having little heat at first and an unobstructed draught. The kiln and china will heat gradually and dry at the same time. Increase the fire at intervals of ten or fifteen minutes. There must be a strong and uniform flow of gas, if such is the fuel, with sufficient draught to carry off any that is superfluous, or there will be a residuum which will fall on the contents of the kiln and fuse to the surface of the china, causing a gray tinge that sometimes darkens to absolute blackness. It is a usually fatal accident, which need not occur, if proper care is exerted to prevent it. A refiring will sometimes remedy this trouble, but cannot be relied on to accomplish it.

The manufacturers claim that kilns heat alike all around; as a matter of fact this is not true, and it is best that it is not, because usually there are some pieces that require a strong firing while others require a light firing. If the state of all sides of the oven were alike, all could not be accommo-



dated at the same firing. There is one side that always heats first and only experience will show which side it is.

The gold colors, — carmines, purples, crimsons, and violets should go in the hottest place, while the grays, iron reds, yellows, and greens will glaze well in the cooler part of the kiln. Let the browns and blues take the intermediate place. The bottom of the kiln will be hotter than the top. All these degrees of temperature must be noted and taken advantage of when stacking a kiln. Stilts are used to place between the ware to keep them from contact with each other. Without these the different pieces of china would fuse together. They are made of unglazed earthenware. Discard them when they have lost their points. Platten and asbestos may be used for the same purpose; these may be bought in sheets and utilized to form temporary shelves in the kiln, making it more commodious. Do not place any article decorated with liquid bright gold close to the gold colors, especially pinks; use the same precaution as to green gold, as it contains silver. The fumes from these would be liable to injure delicate pinks. Keep the hole in the bottom of the kiln open, if there is one there for draught. If any article is above it, support the china by a large stilt to allow free passage of air.

After the firing is accomplished, allow the kiln to cool gradually before it is opened. If it is a large one a longer time will be required before it is cool enough to unpack with safety. Examine each piece as it is taken out, to discover if the colors are all right and have glazed well. If so, the firing has been successful.

Those who send their work away to be fired should always see that the colors are perfectly dry, especially the gold. Otherwise there is great danger of injury by rubbing, while in transportation.

## MODELING IN CLAY AND WARE PAINTING

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CLAY, for the use of amateurs, may be procured at all potteries, and art stores sell it in the dry state; it is then moistened with water when required for use. That of gray color is best, showing shadows better than red or blue clay. To remove air bubbles in the moist clay, cut through the mass with a fine wire, and then slap the pieces together sharply, repeating the operation until it cuts without disclosing bubbles. If the clay be too moist, lay it on some porous surface for a few minutes, which extracts the surplus water. The best and most important tools for modeling are the fingers. Use them as much as possible. All modeling tools should be made in the shape of the thumb, larger or smaller, as the case may be. For very fine work very small ones will be required. Build up your object, piece by piece, not attempting any finishing until the whole work is roughly blocked out. A good subject to commence with will be found in any large leaf, or cast in plaster from a leaf. Begin by making a slab of clay on one of your pieces of board or slate, about nine by four inches, and one inch thick, making it smooth and sharp at the edges. A common knife may be used for this. Next, press into position with the fingers small pieces of clay until the general form of the leaf is made, after which use the small tools for finishing, making indentations, veins, etc. In modeling figures, some practice will be required before arms reaching into space can be made without some support being introduced to prevent the clay tumbling down; but experience will gradually enable one to determine the amount of strain the material will bear. If the work is to be baked, no supports can be used, as they will cause the piece to burst; otherwise, blocks of wood tied together with soft copper wire may be a valuable aid. Temporary supports or props may also be made of soft clay, and removed when, by drying, the limb becomes more firm. These may, of course, be used for any piece. When starting any portion of a figure, say a hand or a foot, from a copy or a model, make the form in the rough first. The large masses must, in every case, be placed correctly before any details are essayed; it



is useless to place the features on your work until the proper location of the same is found.

### POTTERY DECORATION

The names given to different wares vary very much. Pottery may be ornamented in high or low relief, or simply carved or incised. At the potteries various shapes of clay can be purchased in the green state, *i. e.*, with the clay still wet; these may be ornamented according to the fancy or taste of the designer, then painted, and, after drying, are fired, being then in what is called the biscuit state. A second firing, called the glaze, the result of which intensifies the colors, and gives the object an appearance of having been dipped in molten glass, completes the jar or vase. One of the most effective methods of decorating pottery is to carve or incise patterns on the wet clay of the vase itself. Take care to have it in such condition, that, when a cut is made on the surface, it will be sharp and clean; it must not be dry enough to crack or make brittle shavings, nor yet wet enough to cut without leaving a sharp edge. Small shavings and specks may be left on the work until it is dry, when they may be brushed off with ease, without injury. As to tools, use anything that will cut the clay—chisels, knives, spoons, etc. When the vase has been decorated with patterns incised, it may be painted in various ways. The cuttings may be colored and the ground left plain, or *vice versa*.

Colors used for painting pottery under the glaze are quite different from those used for overglaze work. The amateur will save much trouble by remembering this. The colors are prepared from metallic oxides, and are few in number. They come in dry powder form, and are put up in small bottles. Any art store will supply them. The following colors are essential for the underglaze work:



Rose-leaf Green No. 1	Apple Green	Buff
Rose-leaf Green, No. 2	Sèvres Green	Yellow
Vandyke Brown	Chestnut Brown	Orange
Deep Brown	Mazarine Blue, No. 1	Purple
Black	Mazarine Blue, No. 2	Pink
White comes in a fine clay.		Crimson

Different shades are made by mixing the colors with the white clay, taking care to do this thoroughly with the palette-knife. Here comes the hardest task for the beginner, as it is not possible to state on paper how much or what proportions of clay and color will produce certain shades; only much observation will give you such knowledge as can be obtained. Even the most skilled in pottery painting are more or less in doubt as to the results of their labor.

As the firing will change the color of the paints it is necessary to learn by experience how to mix and apply them; for instance, that which after firing comes out a deep blue, when first put on, is of a dusty gray color. It is a good plan to make a number of test tiles of clay, painted with the different colors and marked. Then have them fired. Use a piece of thick glass for a palette. To enable the colors to be easily seen paint the back white. Beginners find much trouble in keeping their work in a "green" state. The best way is to keep it in stone jars. Get a few common butter crocks in different sizes, with lids. They are cheap and will retain the moisture in the clay longer than any other receptacle.

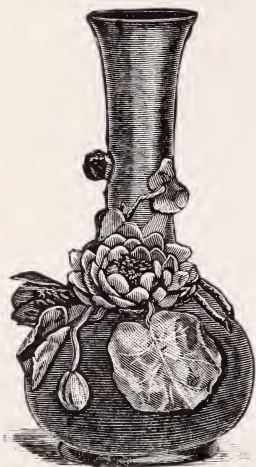
To paint underglaze use the biscuit-ware, which, being very absorbent, must first be covered with a thin coating of gum tragacanth and water to stop the color from being taken in too quickly. Paint and design carefully as there can be no rubbing out in this work. Put in the first washes in water-color, mixing the color with gum and water instead of fat oil. When all the ground work has been painted in, apply over it your metallic colors mixed with oil and turpentine. Have broad, square-tipped brushes, using the long-pointed tracing brush for outlines. When your work is finished, send it to the kiln, where it will be glazed and fired. When done the effect is very like a highly varnished oil painting.

## IMITATION POTTERY

Another beautiful ware is now made and sold by art dealers which for decorative purposes is fully equal in appearance to the popular Barbotine, while it is much cheaper, being in fact but one-fourth to one-half the price, and is painted in the same manner. It consists of vases, plaques, and panels

with flowers modeled upon them in high relief after shapes patterned from the famous Limoges and Faience ware. No firing being required, it is easy for the amateur to follow nature in the coloring. Any good oil colors can be used, and the bronzes used in lustre work are very effective in connection with the oil colors for tipping the edges of leaves and petals, giving a pretty and striking appearance to the work. Vases in this ware can also be had with fanciful designs carved upon them in bas relief, as seen in the second illustration, in great variety and in many patterns. These are very handsome when covered entirely with one shade of the bronzes, or painted with the bronzes

in two or more shades. Before commencing the painting of the genuine Barbotine ware, it is essential to first brush the piece over with shellac or foundation varnish; the imitation ware does not require this preparation. The materials required are as follows for the decoration of Barbotine and imitation Barbotine: Oil colors in tubes, a palette, boiled linseed oil, bristle and camel's hair brushes. Those who are at all skilled in other branches of painting will find they know quite enough about mixing and applying colors to paint this pottery. Add considerable oil to your paint to cause your colors to spread and not show brush strokes, thus pro-



ducing the soft, melting effects so beautiful in Limoges. Commence at the top of the vase to paint and when every part of the background is covered proceed with the design. The background may be in several shades of the same color. Thus, begin at the upper part with light blue, taking a little more color on your brush as you advance,— then a little brown, then a little black, so that at the base the vase shades down nearly black. All shades of soft grays, greens, browns, yellows, etc., blend well, and produce exquisite effects. Paint the flower design to imitate nature as well as possible, and when all is finished and the work nearly dry, a coat of copal varnish or amber enamel may be brushed over it, which will produce a fine glaze, preserving and setting off the delicate tints in great beauty. The same general plan may be pursued in the management of panels and plaques. Our illustrations will give an idea of the elegant designs to be obtained in this ware, and the possibilities which they offer for the use of amateur artists in experimental and original effort.





## PYROGRAPHY OR BURNT-WOOD ETCHING

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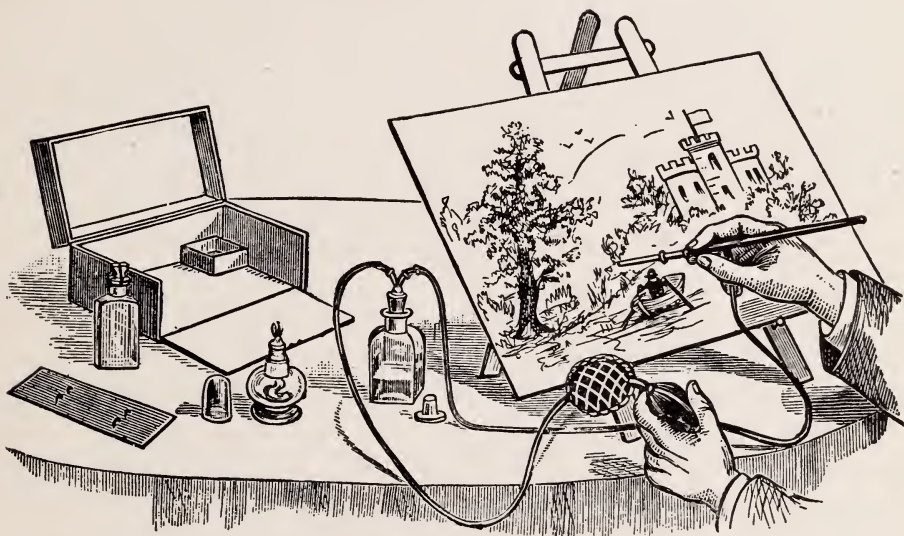


IN many ancient Flemish and English hostelrys, which once were the gathering places of artists whom we to-day recognize as masters, travelers have studied with surprise and pleasure the peculiar decoration of the paneled walls. Traced on the wood with a hot iron, in a curious medley of eccentric forms, may be seen the figures of men and beasts, graceful scrollwork, grotesque caricatures, grand landscape scenes, and faces and forms that are evidently portraits. Time has hardened the oak and walnut panels, has mellowed their color and darkened and enriched the designs which render their surfaces picturesque, and in many instances, if the authorship of the decorations could be fixed, they would be of priceless value to collectors.

The origin of this unique scheme of decoration is not as obscure as it might at first sight appear. In the days when art and conviviality went hand in hand in the Low Countries, and when in England the tavern was a clubhouse, it was the wont of the artists who gathered over pipe and pot of a winter evening, to exercise their passing inspirations on the walls around them, as mementos of the festive occasion. A poker heated red in the fireplace was their tool. With it they sketched upon the wall the creations of their fancy, and the subjects suggested by discussion — a memory of a scene of nature, an idea of a new style of ornament, a merry burlesque on some event of the evening, and often portraits of each other. There is practically no limit to the variety of these “poker pictures,” to give them their conventional title, which have come down to us from the past. The greatest artists of the time are numbered among their creators; Rembrandt and Hals, Brouwer and Teniers, and many more, have thus left records of themselves on the wainscots of the Dutch and Flemish alehouses. In England some of the poker pictures of that eccentric genius, George Moreland, are preserved among the treasures of great collections. Even in the swift and careless sketches of these jovial gatherings, the possibilities of burnt wood as an artistic medium are revealed,

and the results produced in some cases may, without exaggeration, be termed remarkable.

With the changing fashions of artistic life, poker painting became one of the lost arts. But after a century and more of neglect, it was revived. Artists whose travels made them acquainted with these characteristic souvenirs of the past, saw in them a suggestion, which they undertook to realize. Many hands skilled with the brush experimented with the poker, and profiting by the improved methods of modern times, produced pictures where the



creators of the art had made only sketches. It was found quite possible to reach results of the most elaborate and delicate character through the soft, warm tints of the burnt wood, by the skillful manipulation of the glowing iron held by the practiced hand. The art of poker painting has had more attention in England than elsewhere, many fine specimens by famous artists of the present century being in existence there. The uses to which this mode of decoration may be applied are very numerous, and its possibilities in an

artistic way are great. Any one who is a lover of beauty for its own sake, and is capable of drawing even tolerably well, can soon become sufficiently adept in the work to be able to produce very satisfactory results. In the infancy of burnt-wood etching, single pokers, heated rudely by the common fire, were used. Now we have sets of platinum points, graduated in size, from that which brings out the broadest and most vigorous effects, to the fine tool that marks the most delicate line. These can be used as easily as a pencil, or a crayon. The Flemish artists who created the art, would, with our modern implements, have left us masterpieces as immortal as their paintings. It is to the near future that we may look for the highest development of this mode of engraving upon wood.

The process may be applied not only to pictorial effects on wood, but to the ornamentation of leather, furniture, picture frames, screens, toilet articles, the covers of books, and many other things which will suggest themselves with practice and experiment. The owner of a country house in England has had the "Legend of Sleepy Hollow" done in pyrography on the woodwork of a fireplace, the rich sepia tints lending themselves beautifully to the poetic work. For such decoration, gold and silver, also lustra colors, may be used in conjunction with the etching, producing marvelously beautiful results. The panels of doors may be adorned with cupids and flowers, or any fancied design, the purity and delicacy of outline giving a charming appearance. Tables, chairs and screens, are suitable objects for the exercise of taste and skill in pyrography. In the limits of these few pages we can only give the student such suggestions as will enable him to intelligently comprehend the requirements in the way of materials and objects to work on, without confusing him with technicalities. Teaching, aside from practice, is of no avail in this simple art. What he will make of it depends on the student himself. Let him purchase the outfit necessary, and with these suggestions go to work.

#### MATERIALS

A box about 9 inches long, 6 inches wide, and 5 inches deep, contains all the beginner requires — the platinum point or pencil and the metal

holder for it, bottles of benzoline, india-rubber bellows and tubing, and a few other articles, the use of which we shall explain. Any of them can be bought separately, the only expensive one being the platinum point. "Platina," from the Spanish, or "little silver," is a perfect metal, on which no single acid has any effect, and is the only metal suitable for the pyrographic point, as it has the peculiar property of absorbing the benzoline gas used for heating, and of feeding upon the vapor conveyed to the point by the india-rubber bellows. The interior arrangement of the point consists of a small platinum sheath, partially enclosing a fine coiled platinum wire, which, extending some way beyond it, is again enclosed by the outer and larger sheath of the same metal. This is the "point" from which the heat is conveyed direct to the wood. On the end opposite the platinum is a small screw with a milled ridge at the base of it. This fits into either end of the cork handle. Several different sizes and forms of the point are made to suit the various touches and effects required. The simplest form (No. 1) is for rather fine work, also used where a clean line is needed; being cylindrical in shape, it is not convenient for shading or broad work.

No. 2 is of broader make and more spadiform shape. It will be useful for covering larger surfaces, and by using it on the edge a very good line can be obtained. This is the best point to select where only one is purchased, as several varieties of touch can be obtained from it. In ordering the outfit be careful to specify the shape of point required.

No. 3 is the largest point made, being adapted for large and bold work.

No. 4 is a curved background point. It will make thin lines or dots where great fineness and regularity are required, as but a small surface touches the wood, which renders it not so liable to scorch or injure the work. It does not hide the work so much as the straight shapes, and when used convex side downward will give some good broad touches.

For general, all around service, No. 2 is the best. These points will be found sufficient for ordinary work, though some clever accessories have been invented in attachments or "pattern touches," which are small hollow tubes, fashioned at one end to fit on to points Nos. 1 and 4, and at



the other end shaped to give the separate figures in small diamond, clover leaf, and other shapes. These are made in both platinum and copper, and are not especially needed by the beginner. The platinum point in ordinary use will last a considerable time. The metal of which it is composed, being almost as valuable as gold, should be treated with the care suitable to its rank. If it gets out of order, or "refuses to act," intense heat should be applied by holding it in the lamp for some time and blowing forcibly with the bellows. If this fails, send it to the manufacturer, who will repair it at small cost. If it becomes encrusted with potash, from working on soft wood, in such manner that heat does not remove it, the extreme point may be dipped in warm nitric acid, when the corrosion will soon disappear. Never, while hot, bring it in contact with lead or zinc, as the two metals will amalgamate, and the point be destroyed. Two handles of different sizes are usually supplied. For these cork is used, being a better non-conductor of heat and lighter to hold. There is also in the larger handle a screw hole in the center, to which the india-rubber tubing may be attached if preferred, but most people use it from the end.

Two bottles are supplied, one to hold the benzoline while at work, the other for a reserve supply; as, being stoppered, it does not permit evaporation, and being made to fit into the box, can be put away safely from meddlesome hands.

The metal junction is a hollow, tubular arrangement, which has two smaller tubes branching from it. This is attached tightly to the neck of the benzoline bottle in use, by a collar of india-rubber.

The spirit lamp is necessary for heating the point in the first instance. When once red-hot the lamp can be extinguished, and will not be required again, unless by ceasing to work the point becomes cold.

The benzoline should be of best quality, that with a specific quality of from 62 to 65 degrees being the most suitable. Being highly inflammable it must be used with care if near a fire or lamp.

A piece of tubing is fixed to one end of the bellows, which connects with the metal junction at the bottle. Extending from the other side of the metal junction is another tube, to the free end of which the cork handle

is fastened. The other end of the handle is screwed tightly into the platinum point, thus driving the air right into the point, from which it only escapes, after being burned, from a small hole drilled in the side, and thus from the peculiar nature of the platinum the apparatus becomes a gas stove on a small scale.

### WOODS

Wood for burning is a subject to which the student should devote some attention, if he contemplates serious work. It is the background of his sketch or picture. It should therefore be sound, free from knots, and well seasoned, in order to prevent warping, or contraction. The woods most useful in pyrography are oak, elm, ash, holly, lime, sycamore, chestnut, cedar, teak, aspen, poplar, tulip, and the wood from Assam tea chests. American whitewood presents a very good surface for burning, but is most useful for small work, as it varies in color and grain on large surfaces. Holly, sycamore, and lime are most excellent for pyrographic work, large or small, where great delicacy of appearance is required, in drawing rooms, boudoirs, etc. Oak, elm, and ash are solid, useful woods for large spaces, but not fanciful. The wood of Assam tea chests is one of the finest for pyrographic work in which a clear line is required, especially for outline drawing. It can be had of most large tea dealers, but is difficult to obtain in pieces of any size suitable for good work.

Pyrography produces tints of fine rich brown on bone and ivory.

Leather for etching should be first mounted on wood.

### MANNER OF WORKING

When ready for work the benzoline bottle should be about three parts full, the junction fixed firmly into the neck, and the tubes so adjusted as to allow no escape of gas or air.

All being properly adjusted, the spirit lamp should be lighted and the platinum point held in the upper part of the flame for a few seconds. Then press the bellows gently with the left hand, thus forcing the benzoline vapor down the tubing. A glowing red heat in the point will be the

result, which will continue as long as the bellows is used, getting hotter or cooler according to the amount of pressure exerted upon it. The lamp will not be longer required, but it must be remembered that the point will only remain alight so long as the bellows is inflated; therefore, whatever the right hand may find to do, the left hand must attend to the blowing, and if the point be put down, care must be taken to place it in such a position as not to injure anything by contact.

Having to work the two hands differently will at first be the cause of some hindrance to the student, and he will be tempted to engage the services of a "blower." This, however, should not be done, as the first slight awkwardness will soon be overcome, and the two hands will work much more intelligently together if guided by the same brain. A little practice will prove this satisfactorily, and be worth the time spent in mastering the difficulty.

Having a suitable piece of wood before him the operator will begin his trial strokes, having first drawn his design in pencil, if he so prefers. He will be almost certain to find that every one begins or ends with a "dot." This dot is the main enemy of the pyrographic student in his first efforts and arises from unconsciously resting his point on the wood at the beginning or end of the stroke; this tendency can be obviated by practice, which will give knowledge of the "touch" required. Many beginners will be discouraged by finding their first efforts failures from the persistent appearance of the dot, but this trouble always comes right in the end. Put in the stroke with a sweeping motion, with no halt at any part of it, practicing this only until you are able to make a clean line in any direction. Next should follow curves in all directions, until perfect freedom of hand in the use of the point has been obtained. A previous knowledge of pencil drawing will be of great assistance, as it is most important in pyrography that the artist put in his curves, lines, and touches with confidence, as hesitation or blundering at a critical moment may spoil an otherwise successful work. Care must be taken not to grasp the handle too low down, or he will be reminded startlingly that he is "writing with fire." No particular instruction can be given as to the best ways to handle the point, as

only by practice can he become master of the manœuvering of which it is capable. It should be borne in mind, however, that, if the little escape hole for the hot air be held downwards while working, the wood will be liable to scorch and take from the sharp appearance of the lines, which would injure the effect of the work. The two sides of the point do not work equally; therefore, by altering their positions, different directions of line can be obtained, and the point works better if changed often from one side to the other, seeming to gather fresh power after a short rest from its labors.

The light in working should be good, and coming from the left, so that no shadow is cast upon the work; and as gaslight does as well as daylight, pyrography can be made a pleasant winter occupation. This will be appreciated by the large number of persons who are engaged during the day, and have only the evening hours at home.

The artist has all the world to choose from, so numerous are the objects which can be reproduced in pyrography — flowers, portraits, figures, fruit, landscape, conventional designs, and many others. Flowers and foliage will have a great attraction, and may be used with charming effect on many articles. Large, bold subjects, such as lilies, irises, sunflowers, daffodils, and marguerites, are the best to choose from in the floral world, while for foliage only, oak sprays, blackberry, laurel vine, and Virginia creeper are very adaptable; the work of pyrography being much simplified when objects are chosen that have distinctive shapes and outlines.

In flower drawing let the artist get the outline correctly in pencil before commencing with the point, a mistake in burning being fatal to anything so fine and delicate as the petal of a flower, where very great softness and purity are required. A pale, fine-grained wood, such as holly or sycamore, should be chosen, all roughness removed with sand-paper, and the dust carefully wiped off. The outline should then be carefully penciled in, and the artist must decide whether he will leave the background, and let his design show dark against it, or darken the background, leaving the flower in lighter tones upon it. This is of importance, as, if he decides upon the latter course, he must draw his stalks and branches



in double outline, so that each line becomes part of the background when he fills it in, otherwise all the stalk will be merged in the background.

Light upon dark is very effective, though greater care is required in shading the flower. The background must be done very evenly over the entire surface, the simplest and quickest touches being from right to left downwards as in writing. Next would come lateral lines only; this is a good background to relieve portraits. By experimenting, many more varieties may be added, in mixtures of lines and dots for backgrounds, numberless tones being obtainable to relieve the work, keeping it always subservient to the main design, and not chosen so as to give a broken-up appearance to the whole, or distract the eye in contemplating it. For the flower itself have the point at a moderate heat, barely red-hot, as the lines must not be very dark, blackness being a disfigurement. For the background the point should be hotter, and very hot if it is desired to burn away part of the surface so as to leave the flower in low relief; this is often done with fine effect.

The above applies to flowers and foliage when treated in a natural manner. Conventionally the lines should be more severe; with less variety and intricacy of outline. Bunches of grapes on the vine are a fine subject for conventional treatment, exemplifying the beauty of curves, and make very handsome panels for doors and screens. A light mezzotint may be laid over the wood before elaborating the design, which is afterwards drawn in rather dark tones upon it, the result being a rich "old" look that is very beautiful. This effect can always be obtained by laying in the mezzo, and after drawing the design, rubbing in linseed oil.

Portrait work is a fascinating branch of pyrography, and offers many advantages to the student, who, not having to trouble himself about color, can produce a splendid likeness from a good photograph. Any picturesque head from an engraving, or aged heads with strong features and wrinkles, are good subjects for the point, and will give grand results for the time spent upon them. Studies in light and shade from rounded objects, as a plaster-of-paris globe or apple, under both natural and artificial light, will be of

service before attempting this branch of work. A study of Rembrandt's portraits will be found a useful aid to pyrographic portraiture.

Heads of animals boldly executed in life-size, are highly suitable for halls and staircases; rough, shaggy ones are especially good.

Figure drawing is a branch of pyrography that is most decorative and applicable to the adornment of halls, mantel-pieces, panels, etc. Copying from the antique will be found helpful, as, knowing no line can be erased, the student must execute each line with the greatest care, and will thereby rapidly improve in the force and decision of his work.

Landscape is a branch of pyrographic work in which most exquisite and valuable results may be obtained, and, would space permit, we could linger over it for many pages. Any one who loves sepia drawings, etchings, or pen-and-ink sketches will be charmed with burnt-wood etching in landscape. There must not be too much thin detail in the sketch, but a view chosen which is simple in outline; especially so in the case of the amateur, whose work would otherwise be spotty in execution. Trees without foliage are good subjects to commence upon. Clusters of cottages with varied roof lines are picturesque, also broken walls and old streets and hostleries; tree trunks on grand scale with large foliage at foot are of great service and will well repay the artist's labor. A study of some ragged Irish village could be effectively reproduced. The sky must not be made too dark and thereby throw out the "values" of the entire work, this part being properly the lightest portion of the picture. The whole landscape should, as a rule, be kept in mezzotint, with only a small surface very light, and that graduated. At the same time there is great value in leaving the white. These are not antagonistic statements, as a very small portion of white will give light and value to the rest of the tones. Let the artist stand off and survey his work to get the general effect. If it needs strengthening, a few dark touches, put in with confidence, will give what is required, but very little should be absolutely black or deepest brown. The greatest thing after correct drawing is to put as much graduated middle tint as possible into the picture; there should not be a quarter of an inch over its whole surface of exactly the same tone; thus light and atmosphere will irradiate it.

The sea can be well rendered with the point; careful wave drawing and subdued tone being required. A pencil outline should be made.

In the grotesque, the strong form of burnt-wood etching can be used to delineate powerful demoniac work, most forcible in outline. This is allied to heraldry, in which are forms not seen in nature. This form of work applies suitably to armorial bearings on furniture, or shields for hall decoration. The designs should be bold and decisive, and will have a good effect in combination with lustra colors.

The student of pyrography should peruse the works of Ruskin, especially "The Stones of Venice" and "Modern Painters," which will enlarge his mind in this direction, and quicken his perception of beauty. He can also resort to the study of classic and mediæval styles for inspiration; the Moorish and Byzantine will be found of great service, their patterns being very good. The artist can, from these hints, select the road he prefers, which will lead him eventually, as the result of growing power and skill, to essay original design.

A good outfit for pyrographic work can be furnished by all leading art dealers, the cost varying according to the number of points ordered. Wood articles for decoration can also be procured of them.













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